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FIGHTER I: *An Analysis of Combat Fighters and Non-Fighters*

by

Robert L. Egbert, Tor Meeland, Victor B. Cline,
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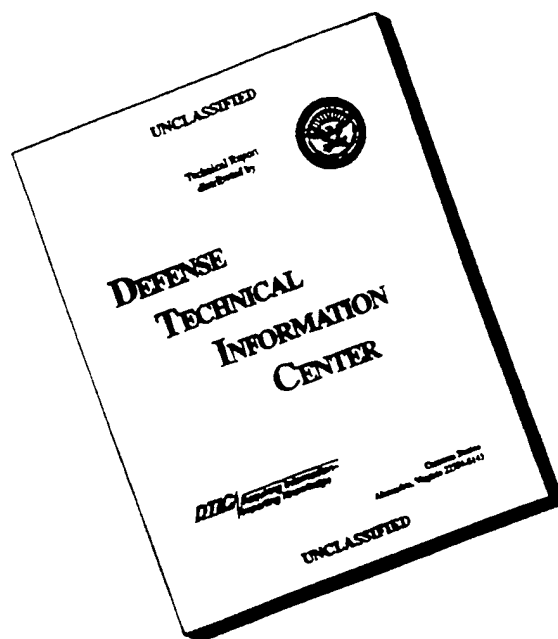
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AND NON-FIGHTERS

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Task FIGHTER I

This research was undertaken while Dr. Launor F. Carter was Director of Research of Human Research Unit Nr 2, CONARC (now the U.S. Army Leadership Human Research Unit).

The contents of HumRRO publications, including the conclusions and recommendations, should not be considered as having official Department of the Army approval, either expressed or implied.

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1. PROBLEM: To identify the characteristics which differentiate the "fighter" from the "non-fighter."

2. DISCUSSION

a. The identification of psychological characteristics of the good fighter as contrasted with the non-fighter is a necessary initial step in a long-range program concerned with optimum utilization of men in combat. Knowledge of these characteristics opens up the possibility of developing experimental procedures for selection, training, and organization of fighting units.

b. This research involved 310 men, identified as fighters or non-fighters from information supplied by their peers in Korean combat. Each of these subjects underwent extensive psychological testing. The major analyses deal largely with the native-born white sample.

3. FINDINGS AND CONCLUSIONS

a. A comparison of the fighter and non-fighter indicates that the fighter tends to:

- (1) Be more intelligent
- (2) Be more masculine
- (3) Be a "doer"
- (4) Be more socially mature
- (5) Be preferred socially and in combat by his peers
- (6) Have greater emotional stability
- (7) Have more leadership potential
- (8) Have better health and vitality
- (9) Have a more stable home life
- (10) Have a greater fund of military knowledge
- (11) Have greater speed and accuracy in manual and physical performance.

b. Research results indicate that men who are low in intelligence tend to make poor fighters; therefore, it can be concluded that when any combat branch is allocated a disproportionate share of men from the national manpower pool who are low in ability, its fighting potential will be reduced.

c. The study shows that the qualities of fighters are potentially measurable and gives promise of the possibility of identifying fighters by appropriately developed tests. Such tests could be used in the selection of combat leaders.

4. RECOMMENDATIONS

a. The findings presented in this study should be considered in the development of classification and assignment procedures to permit combat arms to identify and use potential fighters with maximum effectiveness.

b. Every effort should be made to develop new training methods which could better prepare men identified as potential non-fighters to perform adequately in combat.

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**FIGHTER I:
AN ANALYSIS OF COMBAT FIGHTERS
AND NON-FIGHTERS**

SUMMARY AND CONCLUSIONS

MILITARY PROBLEM

Increasing the effectiveness of the fighting unit is the continuing goal of military leaders. The problems that surround the role of the individual in combat have come into new prominence recently in connection with statements that large numbers of infantry soldiers do not use their weapons in combat.

The problem has been dramatically spotlighted by S.L.A. Marshall during and following World War II¹ and again in the Korean conflict. In *Men Against Fire*, he states that during World War II, only about 15 per cent of the men available in a company normally fired their weapons at the enemy during a firefight; in some exceptional companies, the number of firers was as high as 25 or 30 per cent. Marshall does not imply cowardice on the part of those who did not fire; in fact, he found that, for the most part, non-firers, exposed themselves almost as much as firers did. Neither the type of action nor its duration seemed to influence the percentage of those who used their weapons. From action to action the behavior of firers and non-firers was consistent.

In the Korean hostilities, Marshall found that the percentage of non-firers was reduced to a point where approximately 50 per cent of the men were firing in most actions, and in some perimeter defense situations almost all men were firing.

Many military people have taken issue with Marshall's figures, but Col. Anthony Standish, in *The Combat Forces Journal* of April 1952² not only supports Marshall's statements but in some ways makes even more critical charges. For example, he states that the non-firer, by failing to draw his share of the enemy's fire, makes the mission of the man who is using his weapon even more hazardous. Colonel Standish feels that a man's upbringing has a great bearing on whether he will or will not use his weapon in combat.

Failure of the individual soldier to use his weapon in combat is one facet of the more general problem of poor combat performance. Task FIGHTER, initiated by the Department of the Army during the Korean action, was designated as the first step in a long-range effort to increase the number of good performers, or "fighters," in infantry combat units.

RESEARCH PROBLEM

As an approach to the task of pinpointing causes for the varying performance of infantrymen in combat, this study attempts to develop complete descriptions of the fighter and the non-fighter. The three steps involved in obtaining these descriptions were: (1) identification of a sample of fighters and non-fighters; (2) selection and administration to the sample of a wide enough range of tests to yield a complete psychological description of the two groups; (3) analysis and interpretation of the test results.

METHOD

A 40-hour battery of tests was administered in Korea during the autumn of 1953 to 310 combat infantrymen whom members of the Human Research Unit Nr 2 had selected as

¹References 3, 4.

²Reference 6.

SUMMARY AND CONCLUSIONS

good or poor combat performers. This selection was based on interviews with soldiers who were chosen from a variety of combat situations and who described specific instances of their own and others' recent combat behavior. A soldier was selected for testing on the basis of the nature and number of firsthand observations reported about him.

The test battery consisted of 27 questionnaires and inventories, yielding about 230 scores, and 60 objective tests, yielding about 200 scores. In the course of the testing week, approximately 5,600 items were presented to each subject. The battery included the following types of tests: personality questionnaires; interest tests; background and life history inventories; intelligence and aptitude tests; Military Information Test; attitude tests; projective tests; motivation test; films on leadership and judging personality; humor, art, and music tests; apparatus tests; performance tests of personality; interviews; and buddy ratings.

The lack of consistency of results obtained with racial subgroups within the population made it desirable to limit the major analyses largely to the native-born white sample. A man was included in the native-born white category if he was of neither Negro nor Oriental descent and if both he and at least one of his parents were born in this country.

The extreme ends of the fighter continuum were used, and the exact degree of the extremity is not known. For this reason, measures indicating degree of relationship between fighter or non-fighter combat behavior and a test variable are of limited value, and the application of the results of this study onto a population of soldiers would have little usefulness. Also, since the men were tested only after combat, the differential effects on personality of successful and unsuccessful combat experiences are not known. Therefore there is no real way of determining which of the observed and measured post-combat differences between fighters and non-fighters also existed before they went into combat.

FINDINGS

Within the native-born white portion of the sample, a comparison of the test results of the men judged to be fighters with the scores of those judged to be non-fighters indicated that the fighter tended to be

- (1) More intelligent
- (2) More masculine
- (3) A "doer"
- (4) More socially mature
- (5) Preferred socially and in combat by his peers, and tended to have
- (6) Greater emotional stability
- (7) More leadership potential
- (8) Better health and vitality (larger and heavier)
- (9) A more stable home life
- (10) A greater fund of military knowledge
- (11) Greater speed and accuracy in manual and physical performance.

Because the sample of Negro fighters was so small a full exploitation of the data for this part of the sample was not attempted. However, items (5), (8), (9), and (11) above did reliably differentiate between Negro fighters and non-fighters. The average intelligence of this group was very low, and this fact should be remembered in interpreting the test results.

SUMMARY AND CONCLUSIONS

CONCLUSIONS

(1) The results of this study indicate that men who are low in intelligence tend to make poor fighters; therefore, it can be concluded that when any combat branch is allocated a disproportionate share of men from the national manpower pool who are low in ability, its fighting potential will be reduced.

(2) The study shows that the qualities of fighters are potentially measurable and gives promise of the possibility of identifying fighters by appropriately developed tests.

(3) Having scores available from such appropriately developed tests should permit a judicious distribution of potential "fighters" and "non-fighters" to small weapon crews such as machine gun, flame thrower, and mortar crews, and even to larger units such as rifle platoons or rifle companies. Such tests could also be used in the selection of combat leaders.

RECOMMENDATIONS

(1) The findings presented in this study should be considered in the development of classification and assignment procedures to permit combat arms to identify and use potential fighters with maximum effectiveness.

(2) Every effort should be made to develop new training methods which could better prepare men identified as potential non-fighters to perform adequately in combat.

Chapter I

INTRODUCTION

RESEARCH PROBLEM

In an effort to gain an adequate understanding of the causes for varying performances of infantrymen, this study has attempted to develop complete psychological descriptions of a sample of fighters and of non-fighters who served in Army combat units during the Korean hostilities.

In order to identify fighters and non-fighters with a higher degree of certainty, the researchers decided to use groups representing the extremes of the combat performance scale as a means of maximizing the occurrence of potentially differentiating traits in the sample. Although some loss of predictive power occurs when such results are reapplied to a population of soldiers at large, the approach nonetheless permitted the most complete descriptions of the fighter and the non-fighter—the primary purpose of this study.¹

The quality of combat performance may be thought of as a continuum which ranges from very poor to very good performance. The fighter and non-fighter groups in this study may be viewed as opposite poles of that continuum. Just how extreme the groups are is unknown but, extrapolating from the number of men interviewed prior to selection and making several corrections, a tenuous estimate would place the figure at the top and bottom 15 to 20 per cent of the fighter continuum.

With the cease-fire imminent in Korea, it was impossible to follow the optimal design of testing men before combat and appraising their performance during or after it. In this study, the men had to be selected on the basis of their recent combat performance, and then tested; little "before combat" information was available on them. The inherent weakness of this method, of course, is that it may measure transient characteristics which accrue from Army experience, including combat itself. If this were the case, then later predictive work on other subjects would fail, since in the future the prediction of how well a man will succeed under fire must be made on the basis of his pre-combat makeup. Thus real understanding must be limited by the extent to which reported differences between fighters and non-fighters reflect transient characteristics.

Since the use of extreme groups makes a normative analysis inappropriate, the popular question, "How many fighters are in the average

¹Material developed in the FIGHTER I research has been made available to the Personnel Research Branch of the Adjutant General's Office, the organization within the Army responsible for the development of classification tests.

unit?" finds no answer in these data. Still, the question of how much generalization is possible from the data needs to be asked. Does a study evolving from the combat circumstances—tactics, military situation, terrain, climate—of Korea, in 1952, have valid application in any future war? Do fighter and non-fighter characteristics, in other words, differ with combat circumstances? In answer, it can be said that, regardless of time and place, two aspects of combat which are most apt to influence the behavior of the individual soldier will be present—the extremely personal nature of his involvement, and the constant threat of death.

Subsequent work on Task FIGHTER is concerned with (1) a more thorough understanding of the nature of performance under conditions of extreme stress as developed in peacetime training and (2) the development of a peacetime substitute for combat for purposes of training evaluation, leading to (3) the development of a training program for the potential non-fighter to increase the likelihood of his performing satisfactorily in combat.

RELATED RESEARCH

The research reported here is one of three studies on combat infantrymen sponsored by the Department of the Army during the Korean hostilities. The Personnel Research Branch of the Adjutant General's Office, and the Operations Research Office of the Johns Hopkins University, conducted infantry studies prior to the HumRRO research.

The method used in the PRB study,¹ which was conducted in 1951, consisted of a 15-point scale on which NCO's rated the men in their platoons. It was clearly specified that a certain percentage of men be assigned to each value on this scale. Unless an NCO's rating could be corroborated by that of another NCO who had observed the same man in combat, it was not used for analysis.

The ORO study,² done in 1952, was considerably different. It was concerned with the physiological and psychological effects on men at various stages of proximity to combat, such as with units in reserve, in actual assault, and in recuperation centers.

COLLECTION AND PRESENTATION OF THE DATA

The military actions upon which the combat performances involved in this study are based occurred between 1 July and 27 July 1953. Subjects were drawn from the 45th, 2d, and 7th Infantry Divisions. More than 600 soldiers were interviewed from 23 July to 27 August 1953 to provide information on which to base the selection of the sample of fighters and non-fighters.

The assessment of the 310 men selected for testing took place from 21 September to 28 November 1953. The testing was conducted in

¹Reference 5.

²Reference 1.

central Korea at the 45th Division School of Standards and Replacement Center near Chu'unch'on, just below the 38th Parallel. The test battery took five eight-hour days to administer. The men were brought to the center for testing in groups of 36; each group stayed for one full week.

Details of the selection process are contained in Chapter 2. Chapter 3 relates data on testing procedures and analysis of the test results. The findings and conclusions of the research are presented in Chapter 4.

A more detailed report of the FIGHTER I study is now in preparation in a HumRRO Special Report, "FIGHTER I: A Study of Effective and Ineffective Combat Performers." Data from various phases of the assessment are available from the U.S. Army Leadership Human Research Unit, Fort Ord, California.

Chapter 2

IDENTIFICATION OF FIGHTERS AND NON-FIGHTERS

SELECTION METHOD

As a basis for selecting the sample of "fighters" and "non-fighters" to be tested, the research team of three psychologists conducted interviews among the survivors of combat actions which took place during the final weeks of the Korean conflict. So that the selection would be as representative as possible of combat situations in Korea, participants in a variety of actions (i.e., assault, combat patrol, enemy attack, artillery and mortar barrages) were interviewed.

Before the HumRRO research team went to Korea, they had planned to talk individually with all available survivors immediately following a given action and obtain each man's description, in detail, of what he had seen and done in the action. This method proved unsatisfactory in Korea because of a number of circumstances. Since the cease-fire was agreed upon within two weeks after interviewing began, most interviews had to follow the related action by two to seven weeks and less attention could be paid to details. Also, since the majority of the military actions during the later stages of the hostilities were at night, many of the men had seen little of what went on around them.

The selection method used in the PRB study, which made use of NCO ratings, was considered as a substitute. It was not adopted because the research team felt that, for the purposes of this study, platoon NCO's often would not have enough first-hand information of the critical performance of all subordinates. The method developed by the HumRRO team made it possible to elicit information from a greater number of men.

The selection method finally adopted identified fighters and non-fighters from information obtained by asking combat survivors to name the two or three soldiers they would most and least like to have fight alongside them, and to support their choices with incidents from recent combat experience.

SELECTION OF THE SAMPLE

Interviews With Combat Survivors

The team began interviewing with the companies of the 45th Infantry Division, which had last been engaged in the Christmas Hill area,

and with companies of the 2d and 7th Infantry Divisions which had last been in action in the Kumhwa Valley, and on Porkchop, respectively. The actions occurred between 1 July and 27 July, and subjects were selected from 23 July to 27 August. A total of 647 men were interviewed.

The Division G3 was always consulted by the selection team on the kinds of actions in which the division had most recently participated. He described each action, the companies and number of men involved, the number of casualties on each side, the approximate weather and terrain conditions, the purpose of the action, and its outcome. Arrangements were then made at the division, regiment, and company levels for interviewing available survivors.

The soldiers being interviewed were not informed that the study concerned good and poor combat performance; instead, they were told that the purpose of the interviews was to obtain material which would be useful in preparing others for combat.

Each man was asked to imagine himself in a combat situation he had actually experienced; thus, if he had been a member of Able Company, of the 17th Regiment, when it was first hit on Porkchop on 6 July 1953, he was asked to envisage his position at the time of the assault. He was then asked to name the two or three men he would most like to have beside him during this action, and the two or three he would least like to have beside him. Finally, he was asked to describe actual incidents from past close combat experience to support each of these choices.

Following individual interviews, verifiable information was pooled in a research team conference. On the basis of this evidence, then, men were chosen or rejected as fighters or non-fighters.

Results of the Selection Interviews

The content of the interviews was used by the research team in two ways: (1) The sample for testing was selected from among the soldiers mentioned either favorably or unfavorably and (2) a guide to what constitutes good and poor combat behavior was developed from the descriptions of the "supportive incidents."

Selection of Fighters and Non-Fighters

A soldier was designated a good or a poor fighter on the basis of the nature and number of first-hand observations reported about him by other men. In general, a soldier was selected for the fighter group if: (a) two or more men gave specific examples of his good performance, or (b) if one man gave a specific example of good performance and it was known that the subject had received or had been recommended for a decoration for valor in combat. A soldier was selected for the non-fighter group if (a) two or more men gave specific instances of his poor behavior, (b) if he himself admitted his performance was inadequate, or (c) in some instances, if only one other man gave a specific

instance of his poor performance, provided, in the judgment of the interviewer, the man giving the information was an impartial and competent observer (particularly if there was evidence that no other man being interviewed could have witnessed the incident).

The 647 men who were interviewed gave specific examples of combat performance, good or poor, for more than 1,000 men. From this number, 345 men were selected for testing; because of the extensive testing program, a larger sample could not be accommodated. The sample was limited to enlisted men; the number of officers (21) was too small for separate analysis.

Some of the 345 men selected for testing were killed or wounded during the final weeks of fighting, and others were rotated before the testing period during the autumn months. The final sample tested totaled 310 men.

Description of Fighter and Non-Fighter Combat Behavior

(1) What a Fighter Does in Combat

Descriptions of combat behavior which the infantrymen interviewed considered "good" ranged from general statements about calmness under fire to specific accounts of the highest daring and bravery. A man described as "always cool" was not selected as a fighter unless specific actions could be cited which indicated that his behavior was exceptional and appropriate to the situation. Some examples of such actions are:

A corporal from George Company of the 23d Infantry Regiment volunteered, after being hit himself, to help in extricating a listening post force. Without a flak vest or helmet, he carried a wounded man down a hill. During the descent he was intercepted by the enemy, killed two of them, and continued the rest of the way with the wounded man.

On the night of 18 July 1953, Baker Company of the 180th Infantry Regiment held a finger of land extending from our main battle position toward the base of Christmas Hill. When the enemy overran some of Baker's positions, Item Company was committed to help retake them. A sergeant from Item Company was generally considered to have been the spearhead of the attack. It was stated that, among other things, in the face of enemy observation and fire he dug two wounded men from a bunker in which they had barricaded themselves. Later he jumped on an enemy bunker and tossed grenades inside. Then, with covering fire from other men, he leaped into the trench and covered the inside of the bunker with M2 carbine fire.

On the night of 6 July 1953, Able Company of the 17th Infantry Regiment was attacked by the Chinese and some of its positions were overrun. A PFC from this Company, along with another man, advanced to a trench near the Chinese and set up a barbed wire block. The next morning he and two other men knocked out three enemy-held bunkers with a 3.5 rocket launcher, which none of them had fired since basic training.

From incidents such as these, a more complete picture of the fighter's behavior was organized:

The fighter exposes himself to enemy fire more than others in order to:

- | | | |
|---|---|--|
| 1. Provide leadership (either as a normal function or as a replacement for the designated leader) | { | in assaults and hazardous missions
in getting men into good firing positions
in getting men to fire
in calming men or giving them confidence |
| 2. Take aggressive action (exclusive of leadership role) | { | by advancing toward enemy (firing)
by firing effectively at enemy
by volunteering for and performing hazardous missions |
| 3. Perform supporting tasks under fire | { | such as caring for or evacuating wounded
or helping in body recovery
or, bringing up ammo, repairing weapon,
laying comm. wire, carrying messages |

Under the same exposure to fire as others in the unit the fighter:

- | | | |
|---|---|---|
| 1. Leads men effectively (either as a normal function, or as a replacement for the designated leader) | { | in getting them into good fighting positions, keeping them moving
in getting them to fire
in calming them, giving them confidence, checking them often
in acting generally as a leader |
| 2. Takes aggressive action (exclusive of leadership) | { | by throwing grenades effectively
by firing weapon effectively
by volunteering for and performing hazardous duty |
| 3. Exhibits high degree of personal responsibility | { | by being the last man to leave a position
by continuing on, though wounded
by leaving a less hazardous task to help where needed |
| 4. Remains calm and cool | { | (used only as support for more specific reports of "good" performance) |

(2) What a Non-Fighter Does in Combat

Descriptions of combat behavior which the infantrymen interviewed considered "poor" ranged from a man's seeing and hearing imaginary things to "bugging out" under enemy attack. Some examples of such behavior are:

Soldier A threw down his 57mm rocket launcher, ran away, and hid in his bunker.

Soldier B was said to be very nervous. When a flare exploded nearby, he jumped and fired his weapon into the air. On patrol, as the BAR man, he could hardly be kept in position by his leader. He was said to be jumpy and irresponsible and to fire at imaginary objects.

It was reported that other men in Soldier C's unit had to fire over his head to make him use his weapon. He "bugged out," saying he "couldn't take it any more!" He was AWOL for three days before he was picked up by MP's.

During a barrage, Soldier D sat on the floor of his bunker, crying. He said he couldn't fire.

As with the fighter actions, a picture of the non-fighter's behavior was organized from such incidents:

Under the same exposure to fire as others in unit,
the non-fighter:

- | | | |
|---|---|---|
| 1. Actively withdraws or "bugs out," usually under fire | { | Stays in bunker or in trench when he should be moving |
| 2. Withdraws psychologically | | Refuses direct order to fire at enemy |
| | | Refuses direct order to evacuate wounded or dead |
| | { | Refuses direct order to move from one position to another |
| | | Has to be forced at gun or bayonet point to obey an order |
| | | Freezes |
| | { | Leaves, throws away, or dirties parts of his weapon to make it inoperative |
| | | Stops fighting when only slightly wounded |
| | | When he should be fighting, avoids his primary responsibility by carrying supplies or helping wounded buddy |
| 3. Malingers | | Fails to fire at good target for fear of giving away his position |
| | | Sick (malingering) |
| | | Says he can't take it |
| | | Malingering in general |
| | { | Imagines he "sees" and "hears" things; may fire his weapon or throw grenades at them |
| 4. Defensively over-reacts | | |
| | { | Trembles to such an extent that he is unable to hold or fire his weapon, or fires wildly |
| 5. Becomes hysterically incapacitated | | Breaks down and cries |
| | | Shaky and nervous |

Although there were differences in types of behavior within both the fighter and non-fighter groups, these differences were small when compared with the over-all differences between the two groups.

LIMITATIONS OF THE SELECTION PROCESS

Bias of the soldiers interviewed. A major difficulty with the selection process used in this study arises from its essentially socio-metric nature; that is, bias may occur when men are asked to choose those who perform best in a situation and those who perform poorest. This bias may be particularly pronounced if the man being interviewed has a friend who performs poorly. In this case, he is more likely to rationalize his friend's behavior than he is, say, that of someone he dislikes or does not know. It may simply be that he will deliberately overlook his friend in citing instances of poor performance.

Within this limitation, the selection was probably as effective as possible. Each man who was interviewed was asked to relate actual

incidents which supported his nomination; each nomination and incident was independently confirmed by at least one other eyewitness before a selection was made.¹ Often, however, the size and complexity of the engagement made it impossible to be sure that the behavior of every man involved was considered.

Also, a white soldier might tend to name Negroes as poor fighters on the basis of racial bias rather than actual combat behavior. Indeed, a disproportionate number of Negroes were identified as being poor fighters (see Table 1). The records contain no race designations of

Table 1
COMPARISON OF FIGHTERS AND NON-FIGHTERS
BY RACIAL BACKGROUND

Sample	Native-Born White ^a		Negro		Other		Total
	N	%	N	%	N	%	
Fighters	134	67	18	21	14	59	166
Non-Fighters	67	33	66	79	10	41	143
Total	201	100	84	100	24	100	309

^aNative-born white was defined as a man of neither Negro nor Oriental background who was born in this country and at least one of whose parents was born here.

those who were interviewed, although it may be presumed that white soldiers were in the considerable majority. It is, therefore, impossible to determine the extent to which these nominations may reflect a man's greater willingness to point out deficient behavior in one not of his race. The factors associated with racial origin are discussed in greater detail in Chapter 3.

Experimenter bias. No estimate can be made as to the extent to which members of the selection team were impressed by certain types of combat performance more than by other types, perhaps less spectacular, but of equal quality. It was felt, however, that team conferences significantly reduced the effects of this kind of bias on the final selections.

¹The exceptions to this procedure are listed on pp. 11-12.

Chapter 3
ASSESSMENT AND ANALYSIS

The assessment consisted of the administration of a battery of psychological tests to the 310 men of the sample. In order to obtain as complete psychological descriptions as possible of the fighters and non-fighters, the test battery was made as diverse and comprehensive as the testing time would permit. Table 2 gives a summary of the types of tests used. The analysis consisted of comparing the descriptions of the criterion groups to discover what differences emerged. The results of the analyses of the data are summarized in Appendices A through D.

Table 2
SUMMARY OF TESTS USED

Type of Test	Number of Tests	Administration Time (hours)	Number of Scores
Personality Questionnaires	8	12	86
Interest Tests	2	2	55
Life History Inventory	1	1 1/2	
Intelligence and Aptitudes	2	1	11
Military Information Test	1	2	15
Attitude Tests	2	1 1/2	15
Projective Tests	3	1 1/2	6
Motivation Test	1	1	9
Films on Leadership and Judging Personality	2	2	2
Humor, Art, and Music	3	3	21
Apparatus Tests (such as Coordination, Visual, Sug- gestibility, Cardiovascular, Time Estimation, Stress, Expiratory Force)	20	2	79
Performance Tests of Personality	40	6	119
Interview	1	1	
Buddy Ratings	1	1	8
Totals	87	37 1/2	426

ASSESSMENT DEVICES USED

Two relatively independent assessment schemes were used and may best be described in terms of origin: (1) Many of the tests have a directly empirical derivation, for example, the more applied Minnesota Multiphasic Personality Inventory, California Psychological Inventory,

and Strong Vocational Interest tests; (2) in contrast, many tests were derived from factor analytic procedures which yield scores of a unitary character and internal validity, but often of unknown external validity, for example, the Sixteen Personality Factor Questionnaire. Each man's abilities, temperament, attitudes, motivation, psychomotor skills, esthetic preferences, and physical attributes were included in the areas tested. It was hoped that no personality sector apt to discriminate significantly between the two groups would be overlooked.

The battery included 27 questionnaires and inventories, yielding about 230 scores, and 60 objective tests, yielding about 200 scores. In the course of the testing week, approximately 5,600 items were presented to each man. An annotated list of the assessment devices follows.¹

Test No. ²	Test Description ³
01.	CPI: California Psychological Inventory
02.	MMPI: Minnesota Multiphasic Personality Inventory
03.	Humor: The Institute for Personality and Ability Testing, Humor Test. Form A contains 10 factors of humor purportedly related to personality differences.
04.	16PF: The Institute for Personality and Ability Testing, 16 Personality Factor Test
05.	SVIB: The Strong Vocational Interest Blank
*06.	Life History Inventory. A 115-item multiple choice questionnaire developed specifically to tap areas ignored by the other tests in the battery, e.g., family and socio-economic background, social life, hobbies, recreation, job experience, etc.
*07.	Clinical Interview. A 60-minute structured interview covering areas which were thought to be unassayable by questionnaire methods. Responses coded during the interview on forms previously assembled. Recordings were also made of the entire interview.
*08.	MIB: Military Interest Blank. A 400-item interest test similar to the SVIB, but limited to military activities and objects.
*09.	Ratings: Sociometric Measures. At the end of each week's testing the subjects were asked to nominate those men (in their week's testing group) whom they would <u>most</u> and <u>least</u> : <ul style="list-style-type: none"> 1. Like to go on pass with 2. Like to have alongside in combat 3. Like to share a bunker with 4. Like to have as assistant platoon sergeant (if he was platoon sergeant)

¹Results of the Life History Inventory (No. 06) are summarized in Appendix C, results of the Clinical Interview (No. 07) in Appendix B, and results of the Objective Tests (Nos. T1 through T89) in Appendix D. The remaining results, with the exceptions of the Strong Vocational Interest Blank and the more experimental measures, are presented in Appendix A.

²Tests marked with * were developed at U.S. Army Leadership Human Research Unit, Fort Ord, Calif.

³Bibliographic references for the devices listed will be given in R.L. Egbert *et al*, "FIGHTER I: A Study of Effective and Ineffective Combat Performers," HumRRO Special Report in preparation (U.S. Army Leadership Human Research Unit, Fort Ord, Calif.).

Test No.

Test Description

5. Like to leave \$50 with for safekeeping
6. Guess would do well in Army
7. Like to have as a leader in combat
8. Guess would spend time in the stockade
10. Music: The IPAT Music Preference Test. One hundred brief recorded musical selections are presented to which subjects respond "like," "indifferent," or "dislike." The eleven factor scores represent dimensions of music preference.
11. Inventory P. A 153-item forced choice preference test covering the 9 ergs or drives reported by Cattell: mating; escape-fear; parental-protection; appeal-dependence; curiosity; self-assertion; gregariousness; self-sentiment; and narcissistic play.
12. Henmon-Nelson Test of Mental Ability: Form A. A 90-item test of intelligence.
13. Form 20 Data. Background and aptitude scores entered on the subject's official Army record.
- *14. MIT: Military Information Test. A 300-item test concerning material learned in infantry basic training.
15. Inventory of Personal Philosophy. A 172-item test concerning philosophical beliefs, social attitudes, valued personal characteristics and preferences among famous persons.
16. POS: Public Opinion Scales. Forms EFP stem from the Authoritarian Personality research and concern Ethnocentrism, Facism, Political-Economic Conservatism.
17. Word Suggestion Inventory. A 300-item experimental word association test with write-in and multiple choice answers.
- *18. Inventory F. An 86-item experimental questionnaire covering prior "traits" of fighters. Previous factor analysis indicated the presence of 7 factors.
- *19. SOCON: The Self-Other Concept Test. A 72-item attitude test designed to measure "self-regard," i.e., "self-estimate," and "how subject believes others perceive him."
20. Ink Blots Test (Barron). Thirty ink blots concerning human movement. Test first given for free response and presented again with answers in multiple choice form.
- *21. Picture Preference Test. One hundred post card size reproductions of paintings representing various techniques, schools, periods, and subject matter. The subject indicates if he likes or dislikes each picture.
22. Judging Personality Films. From each of three sound movies of employment interviews, the subject makes predictions about the real life behavior of these people.
- *23. Leadership Films. Two leadership problems are presented via sound film, subjects write individual solutions.
24. Adjective Check List. Three hundred adjectives are presented to the subject who checks the ones descriptive of himself.
- *25. Squad Leader Inventory. A questionnaire designed to elicit pertinent behaviors observed by the subjects in other leaders. This test was related to another research project and not analyzed with respect to fighters.

Test No.	Test Description
*26.	Write-a-story Test. Six specifically designed TAT-like pictures were presented. Subjects were given 5 minutes on each picture.
27.	Personal Check List. A forced choice form of the Taylor Manifest Anxiety Scale consisting of 60 multiple choice questions.
28.	Figure Preference Test. A set of 68 cards containing lines and patterns are sorted into like and dislike piles. A score on Simplicity-Complexity is obtained.

Group-Administered Objective Tests

T1.	Book Preferences. Twenty-five pairs of fictitious book titles and descriptions are presented. Scored for two factors, one concerning drug addiction and morbidity, the other gangsters and general mayhem.
T2.	Encyclopedic Information Test. Scattered among legitimate questions are some for which no answer exists. Measures subject's willingness to go out on a limb in answering questions.
T3.	Estimation of Time Required. Subject estimates time necessary for various performances for self and others.
T4.	Riddles. Measures ability to look at problems in clever, original ways.
T5.	Agreement with Plitudinous Thinking. Consists of a series of statements responded to by true or false.
T6.	Unreflective Acceptance of Unqualified Statements. Consists of a series of statements responded to by true or false.
T7.	Detection of Assumptions. A corollary is given. Task is to choose which one of four possible primary statements must be accepted for the corollary to be considered true.
T8.	Directions of Personal Ability. Scored for: <ul style="list-style-type: none"> (1) Level of experience in personal ability (2) Self confidence regarding untried performance (3) Estimation of personal prowess
T9.	Hidden Words. Scored for number of words found hidden among many letters.
T10.	Preference for Writing. An index of poetic aptness.
T11.	Remarks. Scored for tendency to check obvious remarks, extremity of response to obvious remarks, agreement with them and agreement with platitudes.
T12.	Judgment of Human Nature. Scored for: <ul style="list-style-type: none"> (1) Low pessimism over doing good (2) Tendency to agree
T13.	Associations. Subject writes down the pleasant and unpleasant things he did in the past and anticipates in the future. Scored for: <ul style="list-style-type: none"> (1) The ratio of number of pleasant to unpleasant associations (2) The ratio of number of future anticipations to past remembrances
T14.	Social Evaluations. Subject selects which of each pair of social behaviors is the more acceptable, i.e., the better manners. Score for number of these decisions he can make in a given time.
T15.	Inventory E. Measures knowledge of etiquette.

Test No.	Test Description
T16.	Judgments. Contains 28 statements scored for agreement with majority.
T18.	Ability to Suggest Classifications. Subject lists the possible categories into which various things could be classified.
T19.	Appreciation of Social Influences. Indicates extent to which subject believes "world events" influence his life and behavior.
T20.	Inventory of Physical Adjustment. Questionnaire concerning physical adjustments to severe environmental stimuli.
T21.	Speed of Coding. Consists of a series of coding tests for which subject gives estimates of his next performance. Scored for level of aspiration, excess of aspiration over improvement, reducing effect of failure on aspiration level, etc.
T22.	Judgment of Lines and Dots. Scored for accuracy, speed, underestimation of performance.
T23.	Personal Taste. Essentially a test for social good taste.
T24.	Sketches. Subject identifies as many objects as he can in 16 sketches. Scored for proportion of threatening objects identified.
T25.	Memory. Subject attempts to recall a mixed list of emotionally and non-emotionally toned phrases. Scored for ratio of emotional and non-emotional phrases recalled.
T26.	Chance Purposeful Observation. After a task is completed, subject is required to recall particulars of the completed performance plus extraneous stimuli which had been presented to him.
T27.	Number Series. A clerical task of comparing two series of numbers for discrepancies. Scored for speed and accuracy.
T28.	Perceptual Closure. Similar to the Street Gestalt. Words and pictures are partially obliterated. Scored for speed and accuracy in identification.
T29.	Self Description Test. Two scores of estimation of personal worth obtained.
T30.	Cube Fluctuation. Scored for number of uncontrolled reversals of the Necker Cube in one minute.
T31.	Cancelling Test. This task includes dotting, cancelling certain letters. Scored for speed, oscillation, improvement from trial to trial, accuracy, etc.
T32.	Drawing Test. Subject draws (free hand) copy of picture presented to him. Scored for "expansiveness" (area), "size of drawing" and "attention to detail."
T33.	Line Mazes. Scored for speed, accuracy and improvement in tracing a line thru a long narrow path.
T34.	Criticalness of Judgment. Various social and academic situations are presented. Subject is asked to make judgments about these; scored for criticalness (severity) of judgments.
T35.	Perseveration (rigidity). Scores are obtained on writing words, numbers, and signature forwards and backwards.
T36.	Cursive Miniature Situations (CMS). Essentially a test of ability to follow complex directions. Scored for accuracy, speed, etc.

Test No.**Test Description**

- T37. Hidden Objects. Pictures are presented in which there are hidden or camouflaged objects. Scored for number of objects found in pictures.
- T38. Block A-F Test. A series of statements are presented. Subject indicates agreement or disagreement with them and is tested for memory of these. Scored for extremity of viewpoint, how many of the agrees with vs. disagrees with he remembers, indecisiveness, etc. Several days later same statements are given again, (Battery F) but this time they are attributed to "authorities" (presidents, historians, etc.), as well as neurotics, successful people, etc. He is asked to agree or disagree with them again. His consistency of attitudes and fluctuations (A.D.) are scored.

Individually Administered Objective Tests

- T71. Reaction Time. Uses regular and irregular intervals for auditory and visual stimuli for simple and complex reactions.
- T72. Flicker Fusion. Using a Strobotac in light-proof chamber, CFF, range, and peripheral FF are obtained.
- T74. Visual Adaptation. Scored for time, errors in dark adaptation.
- T75. Tapping Test. Scored for tapping speed using one and two hands, two hand coordination, errors, initial/later performance, etc.
- T76. Weight Estimation. Scored for errors, changes in decisions, fluctuations of errors, consistency of errors.
- T77. Card Sorting. Scored for time, color/form ratio.
- T78. Ataxia (Body Sway). Measures obtained with eyes open, eyes closed, and with eyes closed with forward and backward suggestion.
- T79. Body Type. Scored for ectomorphy, mesomorphy, endomorphy, and reciprocal ponderal index.
- T80. Cardiovascular Measures. Scored for systolic and diastolic blood pressure, pulse pressure, changes in systolic and diastolic pressure, predicted BMR, and change in pulse rate due to stress.
- T81. Body Temperature. Oral temperature taken for 4 minutes.
- T82. Environmental Measures. Room temperature, time of day, serial order of individual testing.
- T83. Psychogalvanic Reflex. Mean PGR deflection, mental/physical stimuli deflections, upward drift during test, and adaptation of PGR to series of stimuli repeated five times.
- T84. Time Estimation. During rest and while working.
- T85. Myokinesis. After Johnson and Mira; reproduction of stimulus line when present and absent.
- T86. Pencil Mazes. Scored for effect of distraction (whistle, lights, etc.) on maze performances.
- T87. Mirror Drawing. Scored for effect of approval and disapproval on performance on line mazes of T33.
- T88. Expiratory Force. Measured by height to which subject can blow column of mercury. Score reflects strength of abdominal wall.
- T89. Breath Holding. Subject first put through 60 seconds stepping exercise.

TESTING PROCEDURE

The testing was done from 21 September to 28 November 1953, at the 45th Division School of Standards and Replacement Center located six miles north of Chu'unch'on, just below the 38th Parallel.

Since it was likely that a five-day schedule of tests would prove monotonous to the men, careful consideration was given to the test scheduling so as to take advantage of any increased interest resulting from frequent interspersing of individually administered tests, those using complex equipment, and discussion or verbal techniques.

Administratively, the tests were grouped into three categories. The first was a set of timed tests. The second contained many questionnaires which the subject could complete at his own speed. In the last category were those tests which required individual administration, two one-hour batteries of individual objective tests and a one-hour clinical interview.

At the testing center the soldiers were assembled in groups of 36. All group testing was done in a tropical shell divided into two large rooms for the timed and untimed tests. The individual objective tests and the clinical interviews were held in three separate tents. The area was remote from military activity and was reasonably quiet.

In deference to the sociometric measures made at the end of the testing week, the men were split into two groups so that whenever possible no group would contain more than one man from a single company. These two groups took the timed and untimed tests in alternate morning and afternoon sessions. Figure 1 shows the testing schedule for the week. For the Leadership Films and the Music Test, the whole group was assembled together. On occasion, additional time was provided on Thursday and Friday evenings for the very slow readers to complete their tests.

Discussion periods for groups of eight or nine men at a time were held on the last morning of testing. As the testing progressed, this hour was used in various ways. Guessing games and charades, having proved unsatisfactory, were replaced by discussions on such topics as the "why" of Korea, military policies, the use of Korean nationals in U.S. Army units. These sessions provided the experimenters with a final opportunity to obtain a view and understanding of the men. Another purpose of the session was to obtain the "buddy ratings" based on the week of experiences shared by the men.

On no instance was the designation of any man as fighter or non-fighter known to the testers until the assessment had been completed.

Because there was some uncertainty about how men who had been pulled off the front lines after so many months of severe hardship and threat of death would receive a 40-hour battery of tests, several steps were taken to insure their comfort and well-being and promote a cooperative spirit. The men were given separate quarters and all the privileges of the School of Standards cadre; they were relieved of all details; they were even given passes, their first in many months. The civilian status of three of the researchers undoubtedly fostered a close tie with the men, while the two enlisted men on the five-man testing team

TESTING SCHEDULE*

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
a.m.	15 minute Orientation	5. Group Objective Tests 6. Barron Ink Blot Test	8. 11 Factor Music Preference Test 9. Picture Preference Test	12. Judging Personality Film 13. Leadership Films I and II	15. Group Objective Tests 16. Adjective Check List 17. T.A.T. 18. Military Information Test	19. Ratings a. Buddy b. Experimenter (Charades, Group Discussion, Final Ratings) (9 men at each hour)	
7:30 to 11:30	1. Henmon-Nelson Test of Mental Ability 2. Public Opinion Scales (Form E,F,PEC) 3. Group Objective Tests 4. SOCON (Self - Other Concept Test)	7. Group Objective Tests	10. Group Objective Tests 11. Picture Preference Test	14. Group Objective Tests			
11:30 a.m. to 1:00 p.m.	NOON MESS						
1:00 to 5:00	<div>Battery X</div> <div> a. Strong Vocational Int. Blank b. IPAT Humor Test (Form A) c. Military Interest Blank (Form HK-3) d. Life History Form e. California Psychological Inventory f. Inventory F (Fighter Factors) g. Inventory of Personal Philosophy </div>						<div>Individual Tests</div> <div> (Subjects withdrawn from Battery X for three 1 hour individual sessions) Battery I (R.T., Tapping, CFF, etc.) Battery II (PGR, Ataxia, Cardiovascular, etc.) Clinical Interview (one hour) </div>
5:00 to 7:00	EVENING MESS						Military Orientation by officer in charge
7:00 to 10:00						Extra session for very slow readers	

*This was the plan of testing for half of each group of 36 men. The other half had the morning and afternoon sessions reversed.

Figure 1

lived near the combat soldiers, ate with them, and provided a most useful liaison.

It must be emphasized that none of these men had ever before been subjected to a five-day testing period. Toward the end of the second day (Tuesday), many of the subjects became tired and the testing was eased. It is noteworthy that every group showed some degree of appreciation for the researchers' task and, in most cases, there was concern that it be successfully completed. The team anticipated that many of the men would ask why they had been withdrawn from their companies and assembled in a strange area to be tested by a group of civilians. Each group was given a cover story which explained that the purpose of the tests was to study the effects of training, but the prevailing rumor was that the testing team had something to do with the rotation policy.

Among the subjects were 11 illiterates who were, for the most part, identified during the first day of testing by observation, the nature of their answers, and sometimes, their inability to read aloud. To keep the illiterates from becoming excessively bored during the test batteries, they were given non-verbal tests at frequent intervals.

ANALYSIS OF THE DATA

The major part of the data analysis consisted of comparing the fighter and non-fighter groups and testing the significance of the difference between them on each of several hundred variables. Because of the abnormal conditions of life which existed in the combat zone, even after the cease-fire, very little attempt was made to compare personality test results with the usual test norms.

As previously mentioned, in this sample proportionately more native-born whites than Negroes were rated as fighters. Thus, the factor of racial background appears to be strongly related to the fighter criterion ratings. Since such variables as geographical origin, religious preference, and educational background differ between racial groups, apparent differences between fighters and non-fighters on a number of variables upon examination turn out to be differences between Negroes and whites. For example, an apparent relationship between religious preference and rated fighting performance, wherein a greater proportion of Catholics than of Protestants are fighters, seems to be an artifact of the fact that 95 per cent of the Negroes are Protestants. The same phenomenon occurs when the results of the scales used to measure emotional stability are analyzed. These scales appear to differentiate between fighters and non-fighters in the total group, but fail to do so when native-born whites alone and Negroes alone are considered. Throughout the battery, differences which emerged for the total group, when broken down for Negroes and native-born whites, often seemed to reflect instead the complex socioeconomic, educational factors which are loosely lumped together under the term "race," rather than the criterion measures. Another area of uncertainty resulted from the lack of information on the race of the soldier-rater, since the fighter ratings were somewhat subjective because of their sociometric basis. For

these reasons, the major analyses were restricted largely to the native-born white sample.

Data from service records were compared for information about length of service, age, rank, and the like, with separate analyses run on native-born whites and Negroes. The Army Classification Battery results were compared with each other, with the Army, and with the ORO and PRB samples. The Military Information Test results were compared, with the samples matched for intelligence.

In comparing the scores of the 100 personality scales, the differentiating scales were grouped rationally; a factor analysis was done on 29 heterogeneous test scales which differentiated the groups; and an item content analysis was made of the discriminating items in the MMPI and CPI in which items were categorized on the basis of content similarity.

In the analysis of the data from the clinical interviews and the Life History Inventories, 214 variables were defined and either placed on a continuum or classified into subcategories. A separate analysis was run on the native-born white sample. Additional comparisons were made of those fighters and non-fighters whose fathers were alive and in the home when the subject reached 18 years of age.

Information on interest patterns was drawn from the Strong Vocational Interest Blank scoring for 54 occupations. The interest patterns of the criterion groups were compared with those established for the various occupations. In addition, the subjects were asked to respond "like, indifferent, or dislike" to each of 800 items from the Strong and the Military Interest Blank. Specific likes and dislikes were compared.

In comparing the scores of the fighters and non-fighters on the objective tests, the particular tests which had the highest correlations with the criterion were identified and categorized. Factors were also developed from the scores. The factor estimates were limited to overall scores based on three to six tests per factor. Except for a few unavoidable instances, tests were not permitted to contribute to more than one factor. To compute a factor score, the test scores were converted to standard scores and then summed.

Results from a number of special instruments, such as experimental personality questionnaires and projective techniques were included in the analyses. The buddy ratings also were in this category. For these each of the four subgroups—native-born whites, Negroes, fighters, non-fighters—was treated separately. For the racial subgroups, the number of persons naming two Negroes, two whites, or one of each race in answer to any one question was tabulated. These are observed frequencies in each of three classes of vote. Also tabulated was the frequency of F-F, F-NF, and NF-NF votes, with the fighter and non-fighter choosers treated separately. A valid vote consisted of two names; only valid votes were counted. Chi squares were computed for each group and for each category of chooser, and the results from all groups were combined.

Chapter 4

FINDINGS

From the results of the tests, some clear patterns emerge which describe psychological and other differences between the fighters and non-fighters in the sample. The reader must remember that this study is limited to an examination of the characteristics of two extreme groups of combat performers. The large group of men who perform neither exceptionally well nor completely inadequately are not considered in this study.

The test results, along with the interpretation of these results, are discussed in more detail in the HumRRO Special Report, "FIGHTER I: A Study of Effective and Ineffective Combat Performers," now nearing publication. The findings outlined here were selected from among the strongest tendencies found in the study.

FINDINGS FOR THE NATIVE-BORN WHITE SAMPLE

(1) The fighter is more intelligent

Perhaps the most striking difference between the fighter and the non-fighter is the fighter's relatively greater intelligence (see Figure 2). The mean level of intelligence of the 310 men, as measured by the Aptitude Area I score, was 86 (versus 100 for the Army generally), making the intellectual level of this sample of men in the front line of Korea, in 1953, considerably below the Army average. The mean level for the native-born white sample was approximately 90.5. At this low level of intellectual competence, fighters scored 10 points higher than non-fighters (94 versus 84). It seems clear that a man with the latter score would have a difficult time carrying out the activities of a combat rifleman; he is simply not adept enough to perfect easily the many techniques and skills which are necessary for efficient performance.

Since there are no data which extend this finding to higher levels of intelligence, we have no assurance that the utilization of men with higher intelligence than those tested would significantly alter the performance of rifle companies in combat. However, within the relatively low intelligence level of the riflemen in the sample, brighter men are more frequently judged more effective fighters.

(2) The fighter is more masculine

Masculinity appears to be a fairly clear-cut area differentiating fighters from non-fighters. Both masculinity of interests as reflected in the Strong Vocational patterns and the masculinity-femininity scales

APTITUDE AREA I SCORES FOR FIGHTERS AND NON-FIGHTERS

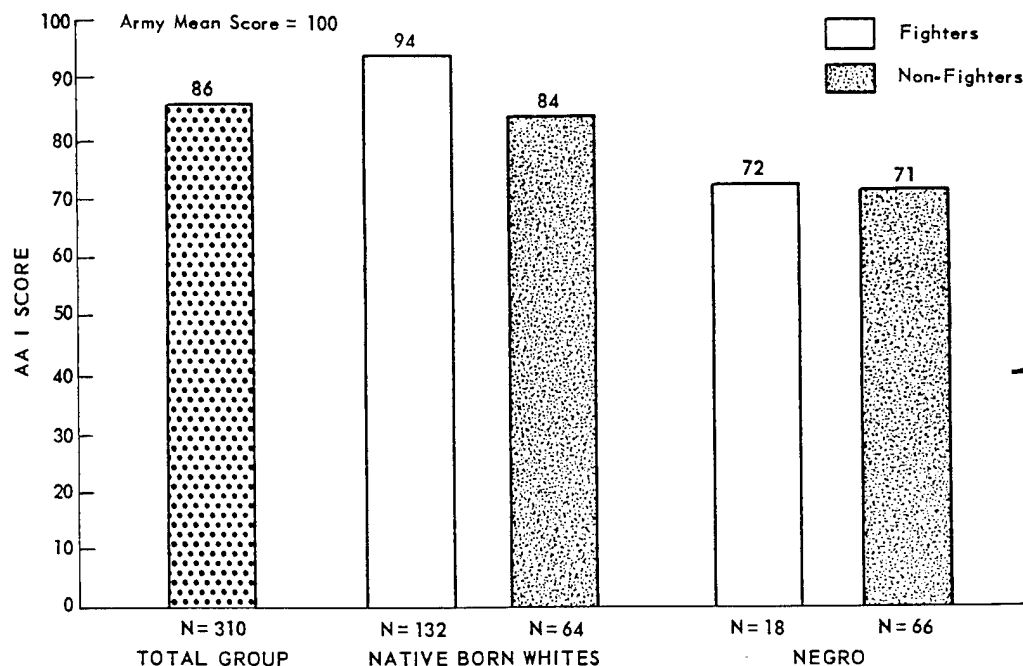


Figure 2

of the personality measures differentiated the two groups. Fighters tended to engage in more body contact sports and have, on the average, participated in them longer and more frequently than the non-fighters.

(3) The fighter is a "doer"

Throughout his life, the fighter has participated in a large number of activities, recreations, and hobbies (see Figure 3). Such things as using a "shop" in the basement, playing poker, grinding the valves on the family car, and working in a backyard garden are examples of the activities in which the fighter has engaged.

The non-fighter has more often participated in painting, cartooning, writing, and cooking.

In general, the fighters' activities can be seen as more aggressive, more varied, more active, and more masculine. These findings may be related to the non-fighters' inability to assume the initiative in combat and their ineffectiveness under the stress of an enemy attack.

(4) The fighter is more socially mature

The fighter is more mature, that is, more tolerant and socially responsible. On personality scales used to measure self-gratification and the tendency to blame others for one's own deficiencies on the one hand, and tolerance and concern for the welfare of others on the other hand, fighters responded in the more socially responsible direction.

(5) The fighter is preferred by his peers

The fighter (as rated by his peers in combat) was more often selected by his peers at the testing center on "buddy ratings" as a leader, a bunkermate, and a social companion. The data suggest that

his peers tend to expect him to do well in the Army, to spend little time in the stockade, and to be trustworthy with money. Since these judgments were made on the basis of short acquaintance, there apparently are characteristics of appearance or behavior which lead people to make such judgments. Also, the findings are noteworthy inasmuch as "buddy ratings" have shown great merit in predictions of individual behavior.¹

(6) The fighter has greater emotional stability

Although there was no clear evidence that fighters in all respects possessed better "mental health" than non-fighters, some of the findings might be interpreted to mean that the former group showed fewer symptoms of anxiety and ego weakness.

(7) The fighter has leadership potential

Fighters obtained significantly higher scores on tests used to measure social ascendancy, status, participation, and qualities related to leadership potential such as independence, role playing ability, dominance, and social extroversion (see Figure 3). Whether these qualities were related to the fighters' relatively higher rank could not be determined since rank was also associated with length of time in Korea.

(8) The fighter has better health and vitality

The fighter was an inch taller and eight pounds heavier, on the average, than the non-fighter (see Figure 3). He tended to suffer fewer psychosomatic ailments such as backaches, constant fatigue, and bed-wetting (after nine years of age). He more often described his health as excellent; with respect to enduring hardships and "roughing it," the fighter more often said, "I can take it better than the average man."

(9) The fighter had a more stable home life

The fighter tended to describe his home life as harmonious more often than did the non-fighter; he tended to name his father as the disciplinary agent and to describe the discipline as moderate and generally verbal. In contrast, more often in non-fighter families the father had died before the boy was eighteen (see Figure 3), the parents had never been married, or there was general paternal disinterest and the mother became the disciplinarian. In this case, the discipline was more often described as physical, frequent, and administered erratically.

The fighter tended to see his mother as an efficient housewife and as handling the discipline "just about perfectly." He more often described his mother's personality as "warm" than did the non-fighter.

A greater stability and completeness in the fighter's home was more frequently evident. Since among the non-fighters many of the fathers had died before the boys were eighteen, these boys may have lacked a male figure with whom they could identify and thus missed learning of the masculine roles which seem to serve the fighter so well. It might be recalled here that some of the greatest differences in the findings involve scales which measure masculinity, scales in which the non-fighter did not score as high as the fighter.

The "emotional tone" of the fighter's home life was more often rated as one of "upward striving" and "permissiveness." His parents

¹Reference 2.

COMPARISONS OF FIGHTERS AND NON-FIGHTERS

(Native-Born Whites)

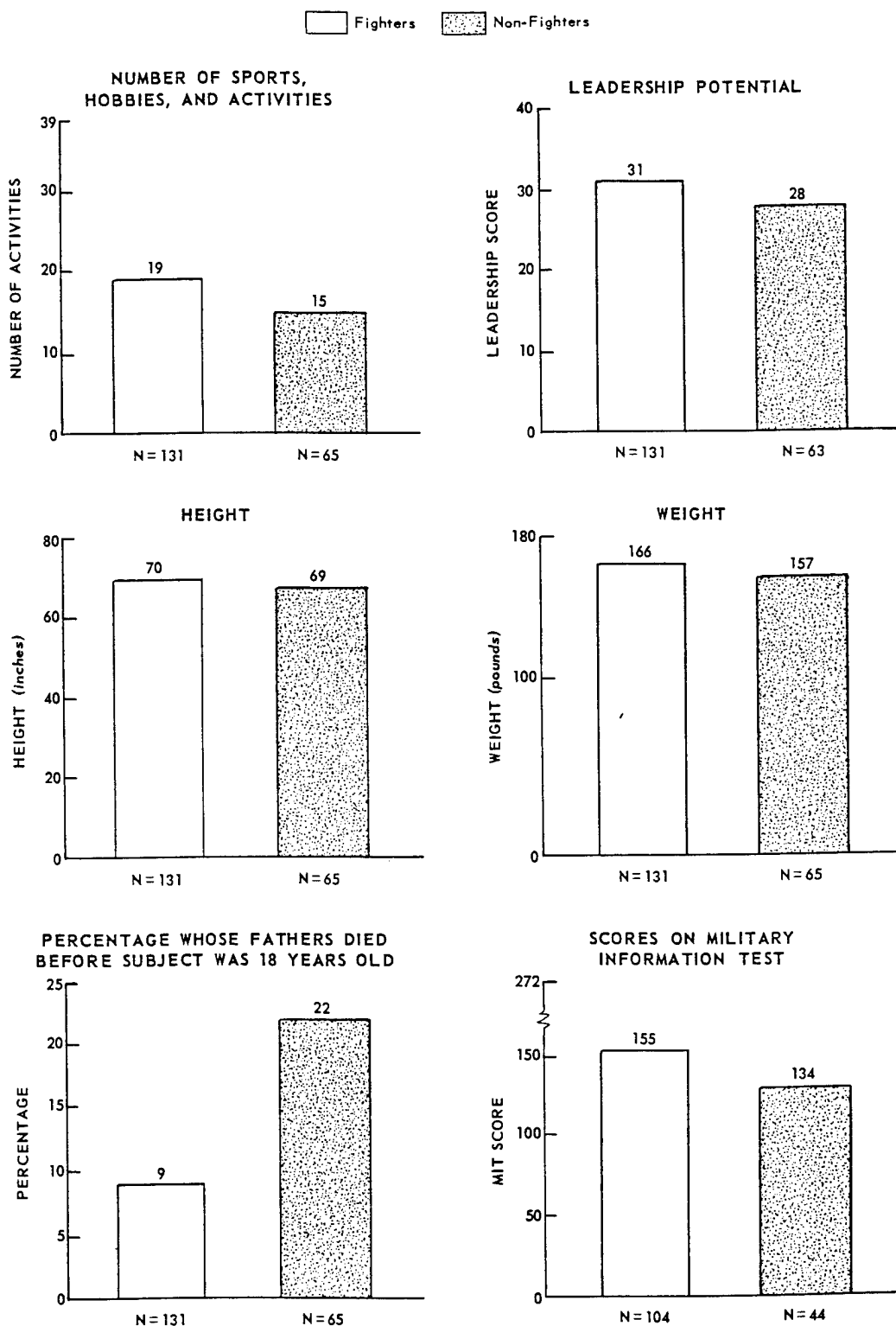


Figure 3

more often allowed him to choose his own occupation and showed great interest in his choice. The "intellectual climate" of the home was more often rated low for the non-fighter. Contrary to the comparative "indifference" in the non-fighter's home, there was a stronger affectional tie between the fighter and his father. In most cases, this tie was a very positive relationship, but in about 6 per cent of the fighter cases, there was a very intense dislike for the father which was not indicated at all by any of the non-fighters. More frequently, the sex education of the fighter was mediated by his parents and teachers.

The location of the home in city, town, or farm seemed to have no relation to a man's behavior in combat in this study, nor did the frequency of family moves.

(10) The fighter has a greater fund of military knowledge

The fighter tends to have more information on weapons and military tactics. (In analyzing data on amount of military information, the intelligence factor was eliminated.) The fighter, on the average, showed a greater proficiency in material concerning weapons and tactics but did not differ from the non-fighter in his knowledge of general subjects. This difference does not necessarily mean that the fighter had more military knowledge before he was exposed to combat; it may be related to his motivation to acquire and retain information important to success in combat, to his rank, or to his length of service (see Figure 3).

(11) The fighter exhibits greater speed and accuracy on performance tests

On the objective tests administered to the sample the fighter achieved a remarkable record. On the average, his reaction time was faster, regardless of whether the warning interval was regular or irregular. His speed of decision, judgment, tapping,¹ visual adaptation, and two-hand coordination tended to excel those of the non-fighter. The accuracy with which he completed clerical tasks, made decisions in a miniature situation, and his care in reproducing a drawing tended to surpass that of the non-fighter. In effect, his relative competency has been interpreted to reflect a fast, determined, effective action, non-suggestibility, and individuality of opinion.

NEGRO FIGHTER AND NON-FIGHTER DIFFERENCES

In the sample of Negro soldiers, there was no great difference in intelligence between fighters and non-fighters. The low Aptitude Area I scores, 72 and 71 respectively, indicate that the Negroes in the sample were, on the average, in the lower 7 per cent of the Army's intelligence scale.

It appears that the usual type of questionnaire had more limited use in describing personality differences between the Negro groups of the sample than in describing the native-born whites. The Negroes' low intelligence level indicates they may have had difficulty in comprehending written matter; if this is the case, their answers may be more

¹Actually a measure of normal tempo counted by a stylus tapping on an electrical plate.

random than real. However, the results of the interview and the performance tests, in which reading and writing ability are unnecessary, indicate that differences between Negro fighters and non-fighters do exist.

The Negro fighter tends to be faster and more accurate on performance tests such as those mentioned in Finding (11) in the preceding section. His home life tends to have been more stable and wholesome, and his health and vitality on the average surpassed that of the Negro non-fighter. He is more often preferred by his Negro peers on the buddy ratings.

REFERENCES AND APPENDICES

REFERENCES

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Appendix A

COMPARISON OF FIGHTERS WITH NON-FIGHTERS
ON QUESTIONNAIRE-TYPE PERSONALITY TESTS

Test No.	Variable	Total Group ¹		p ²	Native-Born White		p
		Mean Score			Mean Score		
		F	NF		F	NF	
01. CPI		(N = 162)	(N = 138)		(N = 130)	(N = 66)	
.01	Academic Achievement	21.49	20.46		21.76	20.95	
.02	Delinquency	20.39	21.92	*	20.12	20.73	
.03	Dissimulation	11.27	14.96	**	10.48	12.74	*
.04	Dominance	23.78	22.97		23.98	21.76	**
.05	Femininity	16.44	18.52	**	16.17	18.02	**
.06	Flexibility	7.44	6.91		7.42	7.14	
.07	Good Impression	17.28	16.86		17.14	16.64	
.08	Graduate School Potential	5.78	5.03	**	5.90	5.21	**
.09	Honor Point Ratio	14.30	13.33	*	14.35	13.59	
.10	Impulsivity	23.21	24.85	**	23.02	23.23	
.11	Infrequency	3.84	5.64	**	3.42	4.45	*
.12	Intellectual Efficiency	32.87	29.88	**	33.66	30.67	**
.13	Neurodermatitis	13.13	13.71	*	13.21	13.89	*
.14	Psychological Interest	9.83	8.88	*	9.54	8.92	
.15	Responsibility	24.41	22.75	**	24.68	23.36	
.16	Self Acceptance	19.12	18.61		19.52	17.88	**
.17	Social Participation	22.20	21.67	**	22.61	21.00	*
.18	Social Presence—X ₁	32.59	30.87	**	33.20	31.42	*
.19	Social Status	16.20	15.14	*	16.37	14.23	**
.20	Tolerance	16.09	14.23	**	16.35	15.06	
02. MMPI		(N = 161)	(N = 134)		(N = 131)	(N = 63)	
.01	Academic Achievement	11.07	10.58		11.30	10.89	
.03	Caudality	13.12	15.69	**	12.48	15.35	**
.04	Delinquency	4.56	5.25	**	4.50	5.06	*
.05	Dependency	21.37	26.30	**	20.48	24.67	**
.06	Depression	19.82	23.32	**	18.82	21.79	**
.07	Dominance	8.99	8.29	*	9.05	8.14	*
.08	Dissimulation	10.44	13.75	**	9.74	12.24	*
.09	Ego Strength	44.04	39.17	**	45.31	40.06	**
.10	—F	10.20	14.62	**	9.27	12.44	*
.12	Femininity	5.51	7.07	**	5.45	6.57	**
.13	Honor Point Ratio	8.40	7.81	*	8.52	7.97	
.15	Hypochondriasis	15.77	17.78	**	15.01	16.25	
.16	Hypomania	23.30	24.14		23.12	23.44	
.17	Hysteria	21.34	22.98	*	20.86	22.05	
.18	Intellectual Efficiency	25.98	22.93	**	26.59	23.60	**
.19	X ₂ Impulsivity, Self-centeredness	9.75	10.60	*	9.50	10.41	*
.20	Graduate School Potential	8.10	7.33	*	8.32	7.57	
.21	—K	14.37	13.32	*	14.64	13.54	
.22	Leadership	30.58	27.38	**	31.23	27.95	**
.23	—L	4.63	4.75		4.50	4.60	
.24	Low Backache	10.22	9.94		10.06	9.76	
.25	Masculinity-Femininity	22.96	24.94	**	22.48	23.79	*
.26	Neurodermatitis	7.44	7.54		7.53	7.40	
.27	Originality	10.67	10.79		10.66	10.51	
.28	Paranoia	11.46	13.01	*	11.03	12.13	
.29	Parietal Lobe Damage	11.98	14.44	**	11.31	14.37	**

(Continued)

(Continued)

¹F, Fighters; NF, Non-Fighters.²The p values are based on t-test of difference between percentages and indicates probability that differences at least as large as those observed would occur by chance. * = Significant at .05 level; ** = significant at .01 or less. Probabilities greater than .05 are considered nonsignificant and are omitted.

Appendix A (Continued)

COMPARISON OF FIGHTERS WITH NON-FIGHTERS
ON QUESTIONNAIRE-TYPE PERSONALITY TESTS

Test No.	Variable	Total Group		p	Native-Born White		p
		Mean Score			Mean Score		
		F	NF		F	NF	
02.	<u>MMPI (Continued)</u>	(N = 161)	(N = 134)		(N = 131)	(N = 63)	
	.31 X ₁ Poise, Spontaneity	14.61	13.28	**	14.89	13.40	**
	.34 Psychasthenia	29.06	32.05	**	28.25	30.51	*
	.35 Psychological Interest	3.73	3.34	*	3.85	3.46	*
	.36 Psychopathic Deviate	24.49	25.99	*	24.37	25.13	
	.37 Responsibility	11.78	11.50		11.95	11.62	
	.38 Role Playing	19.06	17.61	**	19.55	17.73	**
	.39 Schizophrenia	32.82	38.08	**	31.62	35.06	*
	.40 Schizophrenic Screening Scale	9.12	9.58	*	9.02	9.25	
	.41 Social Introversion	26.74	29.46	**	25.92	29.76	**
	.42 Social Participation	16.65	16.03		16.92	15.25	**
	.43 Social Status	19.47	17.98	**	19.48	17.67	**
	.44 Factor A	14.80	17.90	**	13.91	17.00	*
	.45 Factor R	15.22	15.73		15.12	15.98	
	.49 Tolerance	16.32	13.95	**	16.66	14.37	**
03.	<u>Humor Test</u>	(N = 163)	(N = 138)		(N = 131)	(N = 66)	
	.01 Factor 1	4.80	4.15	**	4.79	4.44	*
	.02 Factor 2	3.20	3.87	**	3.01	3.74	**
	.03 Factor 3	3.69	4.15	**	3.61	4.18	**
	.04 Factor 4	1.99	2.26	*	1.96	2.17	
	.05 Factor 5	4.67	3.98	**	4.81	3.91	**
	.06 Factor 6	3.27	3.07		3.25	2.97	
	.07 Factor 7	5.01	5.39	*	5.02	5.38	*
	.08 Factor 8	3.21	3.59	*	3.06	3.30	
	.09 Factor 9	2.61	2.97	*	2.59	2.95	*
	.10 Factor 10	3.77	4.07	*	3.73	3.79	
04.	<u>16 Personality Factor Test</u>	(N = 163)	(N = 137)		(N = 131)	(N = 65)	
	.01 Factor A	9.44	9.55		9.42	9.60	
	.02 Factor B	6.72	6.02	**	6.95	6.48	
	.03 Factor C	16.20	14.41	**	16.63	15.38	
	.04 Factor E	12.53	12.42		12.40	12.25	
	.05 Factor F	13.90	13.39		14.19	13.25	*
	.06 Factor G	11.50	11.45		11.49	11.42	
	.07 Factor H	14.97	14.76		15.24	14.26	
	.08 Factor I	7.84	9.28	**	7.66	8.45	*
	.09 Factor L	9.76	9.53		9.43	9.66	
	.10 Factor M	10.69	11.52	*	10.55	10.94	
	.11 Factor N	10.76	9.93	**	11.02	10.35	*
	.12 Factor O	9.36	11.20	**	8.85	10.46	
	.13 Factor Q ₁	8.52	8.90	**	8.39	8.45	
	.14 Factor Q ₂	9.68	9.55		9.70	9.57	
	.15 Factor Q ₃	10.96	10.83		11.26	10.78	
	.16 Factor Q ₄	10.50	12.16	**	10.19	12.54	**
08.	<u>"MIB"</u>				125.47 (N = 131)	107.36 (N = 66)	
10.	<u>Music Preference Test</u> ¹	(N = 160)	(N = 134)		(N = 128)	(N = 63)	
11.	<u>Inventory P</u>	(N = 160)	(N = 134)		(N = 128)	(N = 63)	
	.01 Mating	13.81	14.42		13.66	14.28	*
	.02 Escape-Fear	21.50	17.34	**	21.55	19.04	
	.03 Parental-Protective	25.51	23.89	**	25.76	25.14	

(Continued)

¹ Factor 9 significant at .05 level in Total Group.

Appendix A (Continued)

COMPARISON OF FIGHTERS WITH NON-FIGHTERS
ON QUESTIONNAIRE-TYPE PERSONALITY TESTS

Test No.	Variable	Total Group			Native-Born White		
		Mean Score		p	Mean Score		p
		F	NF		F	NF	
11. <u>Inventory P (Continued)</u>		(N = 160)	(N = 134)		(N = 128)	(N = 63)	
.04 Appeal-Dependence		20.05	21.05		19.84	20.73	
.05 Curiosity		11.09	12.41	*	10.79	11.55	
.06 Self-Assertion and Display		15.15	15.22		15.41	14.74	
.07 Gregariousness		10.23	11.69	*	10.41	11.00	
.08 Self-Sentiment		18.05	17.89		18.34	17.76	
.09 Narcissistic Play		8.54	9.90		8.07	9.89	*
14. <u>"MIT"</u>		149.06	124.42		154.85	134.36	
		(N = 124)	(N = 91)	**	(N = 104)	(N = 44)	**
15. <u>Inventory of Personal Philosophy</u>		(N = 163)	(N = 136)		(N = 131)	(N = 65)	
.01 Fundamentalist Belief		9.91	9.69		10.02	9.67	
.02 Fundamentalist Disbelief		.62	.77		0.59	0.54	
.03 Enlightened Belief		.97	.93		0.94	0.98	
.04 Enlightened Disbelief		.62	.69		0.57	0.70	
.05 Complexity of Outlook		12.44	12.93		12.37	12.35	
.06 Extracception		8.26	7.57	**	8.38	8.12	
.07 Artistic-Complex-Independence		2.75	3.08	*	2.64	2.66	
.08 Chromatic		4.64	4.74		4.59	4.48	
.09 Simple-Obliging-Goodhearted		12.48	12.06		12.71	12.60	
.10 Liberalism		4.40	4.61		4.32	4.62	
.11 Romanticism		5.13	5.28		4.89	4.85	
.12 Intelligent Opinion		8.55	8.41		8.78	8.32	
16. <u>Calif. Public Opinion Scales</u>		(N = 162)	(N = 135)		(N = 131)	(N = 66)	
.01 Ethonce		51.23	52.01		83.30	88.22	*
.02 Fascism		47.31	51.79	*	147.70	151.89	
.03 Political-Economic Conservatism		43.96	42.85		44.28	43.20	
18. <u>Inventory F¹</u>		(N = 162)	(N = 135)		(N = 131)	(N = 66)	
19. <u>SOCON</u>		(N = 147)	(N = 124)		(N = 128)	(N = 62)	
.01 "Self" Estimate		77.76	74.06	*	78.40	73.80	*
.02 Inferred "Others" Estimate		79.79	79.69		80.00	76.70	
22. <u>Judging Personality Film</u>		(N = 163)	(N = 135)		(N = 131)	(N = 65)	
.02 Word List		54.20	52.27	*	54.44	54.03	
27. <u>Personal Check List</u>		23.35	24.02		22.73	23.88	
		(N = 162)	(N = 136)		(N = 131)	(N = 66)	
28. <u>Figure Preference</u>		15.68	17.75		15.30	15.41	
		(N = 165)	(N = 140)		(N = 134)	(N = 64)	

¹Factor G significant at .05 level in Total Group.

Appendix B
CLINICAL INTERVIEW

Item and Rating	Total Group ¹			Native-Born Whites		
	%F	%NF	p ²	%F	%NF	p
A. Behavior During Interview						
Identification with combat unit						
11. High	57	30	**	62	38	**
Above average	26	27		27	31	
Below average	11	22	*	7	22	*
Low	5	17	**	4	6	
(Not rated)	0	4	*	0	3	
Cognitive organization						
12. High	40	23	**	43	18	**
Above average	38	31		35	44	
Below average	18	24		19	24	
Low	13	16	**	2	10	*
(Not rated)	1	5		2	4	
Behavior in interview						
13. Indifferent	5	10		4	12	*
14. Defensive	9	14		9	10	
15. Hostile	3	2		4	1	
16. Confused	5	11		5	12	
17. Cagey, guarded	8	12		7	12	
18. Guilt-ridden	4	7		5	6	
19. Cooperative	79	64	**	81	65	*
20. Sarcastic	4	2		4	3	
21. Smart-alecky	5	4		6	1	
22. Uncooperative	8	5		5	3	
23. Dependent	21	33	*	14	26	*
24. Overly cooperative	7	3		6	3	
25. Conscientious	47	33	*	47	34	
26. Matter-of-fact	49	34	*	48	38	
27. Tense and nervous	10	16		10	15	
28. Self-assured, poised	40	16	**	41	10	**
29. Egotistical, boastful	5	3		7	3	
30. Reserved, dignified	16	12		16	7	
31. Infantile, immature	13	12		12	7	
32. Conventional	21	21		20	25	
33. Interested	30	22		30	21	
34. Peculiar mannerisms	7	14		8	9	
Dress						
35. Neat	57	45	*	58	38	**
Casual	28	33		28	37	
Sloppy	5	9		4	13	*
(Not rated)	10	12		10	12	
Posture						
36. Relaxed	66	55		65	53	
Tense	16	26		17	25	
Other	7	6		6	6	
(Not rated)	11	14		12	16	
37. Odd features	8	5		10	4	
Use of words						
38. Stumbling	1	10	**	1	6	
Hesitant	19	32	**	14	32	**
Average	43	38		47	43	
Fluent	28	11	**	30	9	**

(Continued)

¹F, Fighters; NF, Non-Fighters

²The p values are based on t-test of difference between percentages and indicates probability that differences at least as large as those observed would occur by chance. * = Significant at .05 level; ** = significant at .01 or less. Probabilities greater than .05 are considered nonsignificant and are omitted.

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
A. Behavior During Interview (Continued)						
Verbose	2	1		2	1	
(Not rated)	7	9		8	9	
Rate of output						
39. Slow	16	35	**	14	28	*
Medium	57	42	*	57	58	
Fast	21	16		21	12	
Very Fast	1	0		1	0	
(Not rated)	7	8		8	7	
B. Social-Economic Level						
Family background						
42. High income level	1	2		2	0	
Medium income level	52	36	**	57	51	
Low income level	45	61	**	39	47	
(Not rated)	1	1		1	1	
43. Stable income	32	19	*	35	26	
Variable income	47	52		49	54	
Erratic income	18	28	*	13	18	
(Not rated)	3	2		3	1	
Income source						
44. Professional high	1	3		1	6	
Professional low	3	2		3	3	
Business high	7	4		9	7	
Business low	6	7		5	4	
Industrial high	21	9	**	25	10	*
Industrial low	34	40		28	38	
Agriculture high	13	9		16	16	
Agriculture low	14	22		13	12	
Other	1	0		-	-	
(Not rated)	2	4		2	3	
By field combining levels						
Professional	4	5		4	9	
Business	13	11		14	11	
Industrial	55	49		53	48	
Agriculture	27	31		29	28	
By level combining fields						
High	42	25	**	51	39	
Low	54	71	**	49	57	
Quality of residence						
45. High	1	2		1	3	
Middle class	58	33	**	61	50	
Low	40	59	**	37	43	
(Not rated)	2	5		2	4	
Previous work before the Army						
211. Farm labor	10	11		10	13	
Menial labor	1	8	**	0	0	
Unskilled labor	35	36		32	35	
Semi-skilled work	32	28		35	29	
Skilled trade	5	2		6	4	
C. Home Environment						
Location of residence						
46. Large city	22	22		19	24	
City	24	21		23	16	
Town	22	26		23	28	
Rural	30	29		33	31	
(Not rated)	1	2		2	1	

(Continued)

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
C. Home Environment (Continued)						
Intellectual climate						
47. High	1	0		2	0	
Medium	47	27	**	50	34	*
Low	49	69	**	46	63	*
(Not rated)	3	4		4	3	
The family						
67. A complete family unit in a fairly normal home	68	52	**	72	69	
Not a complete family unit in a fairly normal home	31	47	**	27	31	
(Not rated)	1	1		2	0	
Distance family has moved						
68. Little or none	47	48		46	62	*
Some change	26	26		28	19	
Much change	18	10		20	9	*
Complete break	8	15		7	10	
Frequency of family moves						
69. Often	13	12		13	12	
A few times	20	24		20	21	
Rarely or never	67	62		67	66	
(Not rated)	1	0		0	1	
Community activities:						
70. Father's participation						
Joiner	14	11		17	10	
Average	65	55		66	62	
Isolate	13	13		13	13	
(Not rated)	9	21	**	4	15	**
71. Father's position						
Leader	22	12	*	24	12	
Follower	26	28		26	34	
(Not rated)	52	61		50	54	
72. Mother's participation						
Joiner	13	12		12	12	
Average	71	64		71	62	
Isolate	14	15		14	19	
(Not rated)	4	9		3	7	
73. Mother's position						
Leader	22	14		24	10	*
Follower	23	31		24	34	
(Not rated)	55	54		51	56	
74. Subject's participation						
Joiner	17	7	*	18	7	*
Average	65	68		64	69	
Isolate	16	17		16	16	
(Not rated)	2	7		2	7	
75. Subject's position						
Leader	24	17		25	16	
Follower	21	25		20	26	
(Not rated)	55	58		56	57	
Strength of family kinship ties						
76. High	40	20	**	41	21	**
Medium	46	60	*	47	63	*
Low	14	16		12	13	
(Not rated)	0	5	*	0	3	

(Continued)

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
C. Home Environment (Continued)						
Amount of interaction between the family and other relatives						
77. High	41	28	*	40	32	
Medium	41	47		44	44	
Low	18	21		16	22	
(Not rated)	0	4	*	0	1	
Marital status of parents						
78. Together	71	64		72	74	
Separated	9	11		10	7	
Divorced	9	8		10	4	
Never married	11	18		8	15	
Death of parent while subject growing up						
81. Father dead	15	28	**	11	25	*
Father alive	85	72	**	-	-	
84. Mother dead	7	12		4	3	
Mother alive	94	88		-	-	
Father-mother relationship						
87. Excellent	22	18		22	19	
Average	49	43		48	47	
Hostile	7	13		9	13	
Ambivalent	8	9		10	6	
(Not rated)	14	18		12	15	
Expression of father-mother relationship						
88. Overt	55	58		22	18	
Covert	21	13		53	59	
(Not rated)	24	29		22	24	
Health of father:						
89. Chronic physical illness	38	35		37	43	
90. Chronic mental illness	1	1		1	0	
91. Alcoholism	8	9		9	13	
92. Short-term illness	15	12		15	16	
93. Other conditions	3	1		3	1	
Health of mother:						
94. Chronic physical illness	35	38		32	37	
95. Chronic mental illness	1	2		2	1	
96. Alcoholism	2	2		3	1	
97. Short-term illness	11	13		10	10	
98. Other conditions	2	2		3	4	
Subject-father affect: ¹						
Intensity						
118. High	30	16	*	33	18	
Medium	51	53		51	56	
Low	11	16		10	13	
(Not rated)	9	16		5	13	
Father seen as:						
128. Easygoing	43	39		43	38	
129. Introverted	9	9		7	6	
130. Strict	19	22		21	21	
131. Nervous	9	3	*	10	6	
132. Disinterested	7	10		7	7	

(Continued)

¹Items 119 through 125 concerning details of the nature of the subjects' relationships with their parents (e.g., expression of subject-mother affect) contain few statistically significant differences and are omitted.

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
C. Home Environment (Continued)						
133. Strong	31	20	*	33	21	
134. Demanding	8	9		10	9	
135. Short-tempered	22	22		24	24	
136. Neurotic	7	5		9	6	
137. Vain	3	0		3	1	
Mother seen as:						
138. Warm	59	47	*	57	43	
139. Domineering	2	7	*	3	6	
140. Neurotic	11	9		13	10	
141. Overprotective	10	16		9	15	
142. Suspicious	1	4		2	1	
143. Confident	11	9		10	6	
144. Anxious	42	32		42	31	
145. Patient	34	27		30	24	
146. Understanding	41	36		41	19	**
147. Cruel	0	2		0	0	
Number of older male siblings						
153. None	26	23		24	28	
1	23	23		24	28	
2	18	15		18	16	
3	10	9		7	10	
4	4	5		4	3	
5-9	4	2		5	0	
(Not rated)	15	22		16	15	
Number of older female siblings						
154. None	22	26		20	34	*
1	26	20		29	19	
2	16	14		15	12	
3	9	9		9	10	
4	4	6		4	3	
5-9	5	6		4	3	
(Not rated)	18	20		19	18	
Number of younger male siblings						
155. None	25	21		23	19	
1	29	30		30	29	
2	18	16		16	26	
3	4	5		3	1	
4	1	2		1	0	
5-9	2	3		2	4	
(Not rated)	21	22		24	19	
Number of younger female siblings						
156. None	21	28		18	34	*
1	39	25	*	44	24	**
2	13	16		11	15	
3	8	6		6	7	
4	3	3		2	3	
5-9	0	1		0	0	
(Not rated)	18	21		19	18	
Rivalry with siblings						
157. High				8	16	
Medium				41	41	
Low				23	10	*
(Not rated)				28	32	

(Continued)

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
C. Home Environment (Continued)						
Mutual support and interaction among siblings						
158. High				21	15	
Medium				41	44	
Low				10	7	
(Not rated)				28	34	
Father seen as:						
169. Successfully respected	55	47		62	57	
Essentially mediocre	33	29		29	25	
Unsuccessful or disgraced	5	5		6	6	
(Not rated)	7	22	**	0	1	
170. Forceful personality	33	29		36	32	
Average personality	48	43		49	47	
Ineffectual personality	9	9		10	7	
(Not rated)	10	17		0	1	
Mother seen as:						
171. Efficient homemaker	69	47	**	70	50	**
Average homemaker	25	43	**	24	44	**
Inefficient homemaker	2	3		2	3	
(Not rated)	4	6		3	3	
172. Forceful personality	24	23		24	25	
Average personality	63	60		63	60	
Ineffectual personality	8	10		9	10	
(Not rated)	5	7		4	4	
Punishment subject received:						
173. Amount						
High	9	22	**	11	16	
Medium	66	56		65	65	
Low	22	19		22	18	
(Not rated)	2	3		2	1	
174. Consistency						
Consistent	59	48		61	46	*
Average	32	36		33	40	
Erratic	7	11		6	12	
(Not rated)	3	4		1	3	
175-178. Kind						
Physical	72	72		70	69	
Confinement	21	22		21	28	
Verbal	39	25	*	40	38	
Deprivation	20	19		18	15	
179. Source						
Father	38	26	*	37	37	
Mother	28	40	*	27	34	
Both	27	26		29	24	
Other	5	5		4	3	
(Not rated)	3	2		3	3	
180. Reasonableness						
Reasonable	51	46		51	47	
Average	45	44		43	46	
Irrational	3	5		3	3	
(Not rated)	3	5		3	4	
The single most important source of sex education						
183. Father	7	2	*	8	4	
Mother	3	2		3	4	
Teacher	1	1		1	1	
Peers	23	22		22	18	

(Continued)

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
C. Home Environment (Continued)						
Literature	2	3		3	4	
Personal experience	19	23		18	21	
Other	2	2		2	1	
(Not rated)	43	45		44	46	
Source of sex education:						
184. Father	24	10	**	26	13	*
185. Mother	16	5	**	16	5	*
186. Teacher	9	4		9	4	
187. Peers	64	75	*	67	69	
188. Literature	12	11		11	13	
189. Personal	36	39		34	40	
190. Other	6	4		7	4	
	F	NF	p	F	NF	p
79,80 Subject's age in years at time of separation or divorce of parents	N=28 M=10.0	26 7.7		N=26 M=10.2	6 13.7	
82,83 Age in years at time of father's death	N=24 M=11.8	40 10.3		N=14 M=13.4	17 9.5	
85,86 Age in years at time of mother's death	N=11 M=12.1	18 10.2		N=6 M=10.7	2 11.5	
151, Number of siblings	N=160	138		N=131	65	
152 subject has	M=4.6	4.7		M=4.6	4.5	
D. Religion						
Religious affiliation: ¹						
99. Subject's						
Protestant-established	47	57		46	54	
Protestant-splinter	11	13		11	15	
Catholic	32	20	*	32	26	
Jewish	0	2		0	3	
None	7	5		7	1	
Other	3	1		3	0	
(Not rated)	1	2		1	0	
100. Father's						
Protestant-established	44	53		47	50	
Protestant-splinter	9	11		10	12	
Catholic	32	17	**	30	18	
Jewish	0	2		0	3	
None	9	4		10	4	
Other	1	1		-	-	
(Not rated)	5	12	*	3	13	**
101. Mother's						
Protestant-established	51	58		50	51	
Protestant-splinter	10	14		10	13	
Catholic	35	20	**	35	28	
Jewish	0	3		0	3	
None	4	1		4	1	
Other	0	1		-	-	
(Not rated)	5	4		0	3	

(Continued)

¹Items 102 through 117 dealing with details of the subjects' religious background (e.g. father's attendance at religious services late in subject's life) contain very few statistically significant differences and are omitted.

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
E. "Doer Syndrome"						
Participation in sports						
56. High	40	28	*	43	31	
Medium	38	47		48	38	
Low	21	22		18	31	*
(Not rated)	1	3		1	0	
Type of sports most preferred						
57. Body contact	46	32	*	43	26	*
Other	36	45		37	43	
(Not rated)	18	23		21	31	
Previous work before the Army						
211. Clerical	4	11	*	3	13	**
Managerial	1	2		1	1	
Owned a business	2	0		2	0	
Owned a farm	1	2		1	1	
Student in college	2	0		3	0	
No job before Army	6	2		1	0	
(Not rated)	1	0		4	1	*
Future occupational goal						
212-						
213. Farm labor	0	1		0	1	
Menial labor	1	1		1	0	
Unskilled labor	7	5		8	6	
Semi-skilled work	16	20		16	21	
Skilled trade	12	12		10	12	
Clerical work	1	6	*	2	4	
Managerial	1	0		2	0	
Owned a business	13	10		13	7	
Owned a farm	15	10		17	12	
"my old job"	8	9		7	10	
School, then?	3	6		2	3	
Professional	7	4		8	6	
Stay in military	9	5		9	4	
No plans	7	12		8	13	
(Not rated)	1	0		1	0	
F. Health and Vitality						
Physical Coordination						
55. Excellent	45	32	*	45	31	
Medium	48	50		49	47	
Poor	8	16	*	6	22	**
(Not rated)	1	0		0	0	
Participation in sports						
56. High	40	28	*	43	31	
Medium	38	47		48	38	
Low	21	22		18	31	*
(Not rated)	1	3		1	0	
Type of sports most preferred						
57. Body contact	46	32	*	43	26	*
Other	36	45		37	43	
(Not rated)	18	23		21	31	
Health while growing up						
58. Excellent	63	53		65	47	*
Medium	30	38		27	46	**
Poor	3	5		3	4	
(Not rated)	3	3		4	3	

(Continued)

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
F. Health and Vitality (Continued)						
59. Usual childhood illnesses	51	55		52	60	
60. A single serious illness	22	20		23	24	
61. A chronic illness	7	6		7	3	
Vitality						
62. High	41	21	**	43	18	**
Medium	53	69	**	50	71	**
Low	5	9		4	10	
(Not rated)	1	2		2	1	
G. Social and Educational History						
Subject's Behavior in school						
48. High	16	10		17	7	*
Average } Grade in school	69	66		69	68	
Low	15	22		15	24	
(Not rated)	0	2		0	1	
Involvement in school						
49. High	18	16		19	18	
Medium	46	47		44	37	
Low	36	36		36	46	
(Not rated)	1	2		1	0	
Social tone in school						
50. Positive	45	36		45	28	*
Average	35	43		35	50	
Negative	20	19		20	21	
(Not rated)	0	2		0	1	
Social proficiency in school						
51. High	25	10	**	24	4	**
Medium	45	70	**	59	71	
Low	16	18		17	24	
(Not rated)	0	2		0	1	
Social conformity in school						
52. High	19	17		19	12	
Medium	61	65		62	71	
Low	17	15		17	16	
(Not rated)	3	2		3	1	
Parental expectations as to grades in school						
53. Much	21	20		22	21	
Medium	72	66		73	65	
Little	7	11		5	12	
(Not rated)	1	3		1	3	
Parental expectations as to ultimate level of achievement						
54. Much	37	31		36	34	
Medium	56	55		57	53	
Little	7	10		7	10	
(Not rated)	0	3		0	3	
Age of childhood associates						
63. Younger	9	6		8	7	
Contemporary	76	82		77	87	
Older	12	8		12	4	
Adult	0	1		-	-	
(Not rated)	3	3		3	1	

(Continued)

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
G. Social and Educational History (Continued)						
Quality of childhood associates						
64. High	5	2		3	3	
Average	73	80		75	81	
Delinquent	22	15		20	16	
(Not rated)	1	3		1	0	
Size of "Gang"						
65. Large group	25	23		24	25	
Small group	57	47		57	50	
Individual	16	22		17	21	
Isolate	2	5		3	3	
(Not rated)	0	2		0	1	
Position of subject in his "Gang"						
66. Leader	19	14		18	18	
Variable	67	65		68	59	
Follower	9	15		9	21	*
(Not rated)	5	6		5	3	
Marital status of subject						
192. Married	25	26		24	26	
Single	71	71		71	72	
Separated	2	2		2	0	
Widower	0	0		0	0	
Divorced	1	2		2	1	
Number of children subject has						
193. None	9	5		10	7	
1	11	9		9	9	
2	2	2		1	0	
3	1	2		0	0	
4	0	1		0	1	
Not married	78	81		79	82	
When and how married						
202. Church	17	15		19	15	
Civil ceremonies	11	10		8	12	
At home	1	3		1	1	
Not married	71	72		71	72	
Attitude toward pregnancy and children						
205. Positive	20	16		20	18	
?	4	5		3	6	
Negative	1	4		1	3	
—	75	74		76	74	
Marital adjustment						
206. Very good	17	13		16	16	
O.K.	6	7		6	6	
Not so good	1	2		2	0	
Poor	5	2		6	3	
(Not rated)	71	75		70	75	
Cross-cultural marriage						
207. Yes	1	2		2	1	
No	28	26		28	26	
(Not rated)	72	72		71	72	
Cross-religious marriage						
208. Yes	5	5		5	7	
No	23	23		24	21	
(Not rated)	72	72		0	0	

(Continued)

Appendix B (Continued)

CLINICAL INTERVIEW

Item and Rating	F	NF	p	F	NF	p
G. Social and Educational History (Continued)						
181,182. Age in years at time of first sex experience	N=81 M=15.8	59 14.3	**	N=66 M=16.2	24 15.9	
194,195. Subject's age in years at time of marriage	N=48 M=19.7	40 20.6	*	N=39 M=19.7	19 20.2	
196,197. Wife's age in years at time of marriage	N=47 M=18.3	40 18.7		N=39 M=18.5	19 19.3	
198,199. Time in months that wife was known before marriage	N=47 M=27.0	40 35.9		N=38 M=29.3	19 30.2	
200,201. Length of engagement in months	N=46 M=7.9	37 8.1		N=37 M=7.9	19 8.3	
203,204. Interval in months between marriage and wife's pregnancy	N=23 M=9.2	18 6.3		N=15 M=4.8	7 10.7	

	Total Group			Native-Born Whites		
	%F	%NF	p	%F	%NF	p
Life influences						
214. Miscellaneous	6	7		3	6	
The Army, positive or neutral mention	16	12		18	15	
The Army, negative mention	5	5		4	4	
Commitment to a relationship with a woman	6	5		6	7	
Termination of a relationship with a woman	5	3		6	3	
Unpleasant experiences, general	7	5		8	6	
Parental guidance	7	11		7	9	
The combat experience	3	2		3	3	
An ego ideal other than parents	5	2		5	1	
Becoming independent before the Army	5	3		3	6	
Don't know, can't say	3	5		4	3	
(Not rated)	32	40		31	37	

Appendix C

RESULTS ON THE LIFE HISTORY INVENTORY¹

Item	Total Group ²		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
B. Social-Economic Level						
4. Why did you quit going to school?						
a) Because I graduated						
b) Due to poor grades and lack of interest					**	
c) To get a job and earn some money		**		*		
d) To enter the Army						
e) Other						
18. What was the financial situation of your family during most of your childhood?	##.		#			
a) We were for the most part quite poor						
b) We never had too much, but always managed to get by						
c) We were quite comfortably fixed, though not rich	**		*			
d) We were quite well to do						
32. Which of the following classifications best describes your father's work during most of his life?						
a) Own business	**		**			
b) Skilled trade (machinist, printer, tool maker, etc.)						
c) Semiskilled trade (factory worker, etc.)						
d) Unskilled trade (truck driver, etc.)						
e) Professional (doctor, lawyer, teacher, etc.)						
51. What is the largest amount of money you have ever owed anybody, bank, or loan company?						
a) Virtually none						
b) \$100 or less						
c) \$100 to \$500						
d) \$500 to \$1000	**		*		*	
e) Over \$1000						
52. (Budget of personal expense) (NS) ³						
53. What is the largest amount of money you have ever owed a personal friend? (Do not include banks, etc.)						
a) Virtually none			#			

(Continued)

¹Number in total group were 162 Fighters and 137 Non-Fighters; the Native-Born Whites included 131 Fighters and 65 Non-Fighters; the Negroes included 18 Fighters and 62 Non-Fighters. Significance values for the entire question are based on chi-square tests; * = significant at the .05 level; ** = significant at the .01 level or less. Significance values for the individual responses are based on t-test of the differences between percentages and indicate the probability that differences at least as large as those observed would occur by chance; * = significant at the .05 level; ** = significant at the .01 level or less. Probabilities greater than .05 are considered non-significant and are omitted.

²F, Fighter; NF, Non-Fighter.

³Non-significant items are compressed and the responses are omitted. NS, Non-significant.

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
B. Social-Economic Level (Continued)						
b) \$50 or less						
c) \$50 to \$100	*		**			
d) \$100 to \$500						
e) Over \$500						
54. Do you have a bank account in your own name? (Mark as many as apply.)						
a) Yes, I have a checking account at present	**		*			
b) Yes, I have a savings account at present						
c) No, but I formerly had a savings account						
d) No, but I formerly had a checking account						
e) No, I never had a checking or a savings account						
55. How old were you when you first put money into a bank account of some sort?			##	#		
a) During my grammar school years						
b) During my high school years	**		*			
c) After getting out of high school						
d) I pay as I go, I have no bank account			**			
60. How many people are dependent on you (in whole or in part) for financial support? (such as parents, wife, etc.)			#			
a) None						
b) 1 person						
c) 2						
d) 3						
e) 4 or more			**	*		
78. When in school about how much money did you earn per week on the side?						
a) Almost none			*			
b) \$2.00						
c) \$5.00						
d) \$10.00				*		
e) Over \$10.00						
85. How much of your present salary or income did you spend on personal recreation per week before entering the Army?						
a) Less than \$1.00						
b) \$1-2			*			
c) \$3-5						
d) \$5-10					*	
e) Over \$10.00						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
94. (Largest number of people supervised in civilian job) (NS)						
95. How many different paid (whole or part time) jobs have you had since you were 12. (Do not include Army experience.)						
a) None		**				
b) 1 or 2	*					
c) 2 to 5						
d) 6 to 10						
e) Above 10	.					
98. (Age at time of having first part-time job) (NS)				#		
99. (Age at time of having first full-time job) (NS)						
100. (Number of full-time jobs held between school and Army) (NS)						
C. Home Environment						
1. In your family you are						
a) The oldest		*		*		
b) The youngest						
c) The only child						
d) Other	**					
13. Which applies?						
a) Your parents were both alive when you were 18						
b) Your mother died when you were less than 18 years of age						
c) Your father died when you were less than 18 years of age		*		*		
d) Your parents were dead by the time you were 18						
14. (Parent resembled) (NS)						
15. (Father's memberships) (NS)						
16. (Number living brothers and sisters) (NS)						
17. During your high school years how often did you disagree with your parents (or guardians)?						
a) Almost never						
b) Occasionally we had differences but not very often	*					
c) Frequently disagreed						
d) Was a great deal of bickering and fighting					*	
19. When it came to discipline, my mother						
a) Was too easy with me						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
C. Home Environment (Continued)						
b) Scolded a lot but didn't really mean it						
c) Was really very strict						
d) Handled things just about perfectly	**		**			
30. To which, if any, of the following organizations did your father belong while you were growing up?						
a) Parent-teacher's association				*		
b) Church group						
c) Fraternal or civic organization (Elks, Lions, Rotaries)						
d) Veterans organization						
e) None of these						
31. (Father's memberships) (NS)						
33. When it came to discipline, my father						
a) Usually ran the family with a firm hand	*					
b) Tended to let mother do the disciplining						
c) Entered in equally with mother in running things						
56. During high school how often did you get into disagreements with your parents (or guardians)?						
a) We rarely agreed		*		*		
b) We disagreed fairly frequently						
c) We disagreed occasionally						
d) I almost never had any disagreements with my parents' wishes						
58. (Size of community in which grew up) (NS)						
93. As far as my choosing a career or occupation, my parents	##					
a) Weren't interested and didn't care						
b) Were interested, but pretty well let me decide for myself	**		**			
c) Had pretty set ideas on what they wanted me to be		*				
d) Have insisted I go into a job of their choosing						
D. Religion						
20. When it came to religion, my father						
a) Was extremely religious						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
D. Religion (Continued)						
b) Was quite interested and attended church often			*			
c) Wasn't much interested						
d) Was more religious than my mother						
e) Let me pretty well decide for myself on participating						
21. (Religion of mother) (NS)						
74. Did you attend church during your high school years?			*			
a) Yes, quite regularly						
b) Occasionally						
c) Almost never						
E. The "Doer" Syndrome						
3. (Doing before entering the Army) (NS)						
34. How many of the following had you done by the time you were 18?						
a) Written a check	**		**			
b) Gone alone on an overnight trip to a strange city			*			
c) Made a long distance phone call	**		**			
d) Taken care of a garden	**		**			
e) None of these		**		**		
38. Which, if any, of the following sports do you enjoy when you have time?						
a) Folk dancing						
b) Target shooting	**					
c) Poker	*					
d) Bridge						
e) Chess						
39. Which, if any, of the following sports do you enjoy when you have time?						
a) Racing (auto, motor boat, etc.)	**		*			
b) Dancing	*					
c) Hiking						
d) Track and field						
e) Bowling						
40. Which, if any, of the following sports do you enjoy when you have time?						
a) Football (touch)			*			
b) Football (tackle)	*					
c) Fishing	**					
d) Skiing or tobogganing						
e) Boxing						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
41. Which, if any, of the following sports do you enjoy when you have time?						
a) Golf						
b) Tennis						
c) Baseball						
d) Ice hockey						
e) Swimming	**		**			
42. When you are home and have some free time, what do you like to do?						
a) Play a little poker with friends						
b) Read a book or magazine and listen to records						
c) Take in a good movie						
d) Get out and get a little exercise						
e) Work on our place (in the garden, repair furniture, put up a fence, etc.)	*					
43. How many of the following had you done by the time you were 18?						
a) Played a musical instrument						
b) Skied or ice skated	**		*		**	
c) Gone tobogganing	*					
d) Gone on a wild necking party						
e) Owned a car	*					
44. How many of the following had you done by the time you were 18?						
a) Played ping pong	**		*			
b) Ridden horseback	**		**		*	
c) Played hockey	**		*			
d) Gone on a hunting trip	**		**		*	
e) Bought your own clothes	**		*			
45. How many of the following had you done by the time you were 18?						
a) Played bingo	*					
b) Shot craps	*		*			
c) Played cards	**		*			
d) Shot pool	**					
e) Gotten really drunk	*					
46. In which, if any, of the following sports did you ever make a first or second string high school team?						
a) Football			**			
b) Basketball						
c) Baseball						
d) Swimming						
e) Other						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
47. Which, if any, of the following hobbies have you had?						
a) Chemistry		**		**		
b) Cartooning						
c) Stamp, coin, or insect collecting						
d) Acting						
e) Writing		**				
48. Which, if any, of the following hobbies have you had?						
a) Model plane making						
b) Public speaking, debating						
c) Astronomy						
d) Working on old cars, hot rods, etc.	*					
e) Painting		**		**		
49. Which, if any, of the following hobbies have you had?						
a) Music		**				
b) Cooking						
c) Carpentry or shop work	**		*		*	
d) Radio, electrical gadgets, etc.						
e) Horse racing	**		*		**	
50. How many, if any, of the following things had you done by the time you were 18?						
a) Ground the valves of a car	**		*			
b) Operated a tractor or bulldozer	**					
c) Painted or prepared a room						
d) Mended the cord of an electric appliance	**					
e) Driven a motorcycle	**		**			
57. During your last few years when you lived home (with your parents or guardians) how much time did you spend on family duties—washing dishes, mowing lawn, farm work, etc.?						
a) No time						
b) 1 or 2 hours a week		**				
c) 3 or 4 hours a week						
d) 5 or 6 hours a week						
e) 7 or more hours a week						
73. (Age when first traveled alone over 100 miles) (NS)						
86. How old were you when you learned to use a gun of .22 calibre or larger?	##		##			
a) Less than 8	*				*	
b) 8-10	**		**			
c) 11-15				*		

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
E. The "Doer" Syndrome (Continued)						
d) 16-20 (not including the Army)						
e) In the Army		**		*		
89. How old were you when you learned to swim?						
a) Less than 8	**		*		*	
b) 9-12						
c) 13-18						
d) Over 18						
e) Never learned		**		*		
96. At what age did you leave home and go out on your own, that is, live away from home and earn your own way? #			#			
a) Under 15 years						
b) 16 to 18 years						
c) 19 to 21 years						
d) 22 years or older						
e) Lived at home until I entered the Army		*		*		
97. Why did you leave home and go out on your own when you did?						
a) Had to help support the family or by leaving, made it easier for the family financially		*				
b) Wanted to be on my own—wanted more freedom						
c) If some other reason, explain:	**		*			
102. How did you enter the Army?						
a) Drafted						
b) Enlisted to avoid the draft				**		
c) Enlisted			**			
d) Recalled from the reserve						
F. Health and Vitality						
10. Which, if any, of the following have you had?						
a) Measles						
b) Mumps	*				**	
c) Chickenpox						
d) Whooping cough						
e) None of the above						
a) A stutter or stammer	*					
b) Frequent diarrhea						
c) Nervousness						
d) Polio						
e) Trembling which you couldn't control very well						
a) Heart condition						
b) Gall bladder trouble						
c) Kidney trouble						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
F. Health and Vitality (Continued)						
d) Ulcers						
e) Nervousness						
a) Rheumatic fever						
b) Scarlet fever						
c) Fits or convulsions						
d) Frequent stomach upsets						
e) Back pains		**				
a) Arthritis						
b) Appendicitis or similar operation						
c) Chronic backache						
d) Severe continuing headaches						
e) None of the above					*	
a) Sinus condition						
b) Asthma	*				*	
c) Pneumonia	*		**			
d) Tuberculosis						
e) None of the above						
61. When it comes to enduring hardship and roughing it	##		##			
a) I can take it much better than the average person	**		**			
b) I'm about average with other men my age						
c) I'm a little below average in taking it		*		**		
d) It's quite a trial for me		*				
62. My general health has usually been		##		##		
a) Excellent	*		**			
b) Above average						
c) Average		**		**		
d) Below average						
e) Quite poor		*			**	
63. (Age when began to smoke) (NS)						
64. How much do you usually smoke?						
a) Almost never						
b) 1/2 pack a day			*			
c) 1 pack a day						
d) 1 and 1/2 packs a day						
e) 2 or more a day						
65. At what age did you stop wetting the bed?						
a) Before 3						
b) 3-5						
c) Between 5 and 7						
d) 7-9			*			
e) After 9		**		**		
66. In a list of 100 typical men of your own age, where would you rank as to all-around physical ability?						
a) Excellent						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
F. Health and Vitality (Continued)						
b) Above average	**					
c) Average		*		*		
d) Below average						
e) Very poor						
67. (Frequency of drinking) (NS)						
68. How much time during the last 12 months have you lost because of sickness?						
a) None						
b) 1 day or less						
c) 2 to 4 days						
d) 5 to 9 days	*		*			
e) 10 days or more						
69. Throughout childhood my health was		##				
a) Excellent			*			
b) Good						
c) Average		*		*		
d) Below average		*				
e) Quite poor					*	
70. I have been occasionally troubled by						
a) Constipation						
b) Nightmares						
c) Sweating on cool days						
d) Feeling tired all the time		**		**		
e) Allergies (hayfever, skin rashes, etc.)						
71. (Number of hours prefer to sleep) (NS)						
72. (Number of hours does sleep) (NS)						
Height (inches)		*				
Weight (pounds)	**					
G. Social and Educational History						
2. (Type of high school education) (NS)						
22. When you were in grade school or high school, where did you study or visit with your friends?						
a) My friends usually came to my house		*				
b) I usually went to friends' houses						
c) I usually studied or played alone						
d) Sometimes I went to their houses and sometimes they came to mine	*		*			
e) We lived too far away to visit						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
24. What is your greatest personality weakness?						
a) Let other people push you around and take advantage of you						
b) Sometimes having difficulty getting along with people						
c) Saying the wrong thing at the wrong time						
d) Being too easy going, lacking enough drive						
e) Forgetting people's names	**		*			
25. Which way would other people be most likely to describe you? (Check more than one if necessary.)						
a) Popular and lots of fun						
b) Drive, determination, will power						
c) Sensitive and understanding						
d) Practical and efficient	**		**			
e) Somewhat serious and intellectual						
26. During my last years of high school		#				
a) I almost never went out with girls						
b) I dated only occasionally	*		*			
c) I tended to go steady with one girl at a time						
d) I dated quite a few girls frequently						
27. When it came to joining clubs, making the team, and doing what I wanted to (in high school)	#		#			
a) I found I could do it very easily	*		**			
b) I found it very difficult						
c) I tried very hard and failed sometimes						
d) I rarely succeeded						
28. (Behavior at parties) (NS)						
35. I have, at one time, read the following magazines regularly						
a) Popular Mechanics (or Popular Science, etc.)	**					
b) Post, or Colliers	**		**			
c) Life Magazine						
d) Time Magazine						
e) Pic, Laff	*					
36. I have, at one time, read the following magazines regularly						
a) Esquire				*		

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
G. Social and Educational History (Continued)						
b) Readers' Digest						
c) Argosy, Stag (or other men's magazines)	*					
d) Atlantic Monthly or Harper's						
e) Superman comics						
37. (During teens spent summer vacations) (NS)						
59. Politically how would other people describe you?						
a) Quite liberal	**				*	
b) Liberal						
c) "Middle of the roader"						
d) Conservative						
e) Not interested in politics						
75. How many times did you change schools before you were 16 years of age (other than by graduation)?						
a) Once or less						
b) 2 or 3 times			*			
c) 4 or 5 times						
d) 6 or more times						
76. How old were you when you graduated from high school?						
a) 15 or under						
b) 16						
c) 17	*					
d) 18						
e) 19						
77. During the last year in school what was your average grade?						
a) Excellent						
b) Above average						
c) Average						*
d) Below average					*	
e) Failing						
79. In general how did you get along with your teachers in school?						#
a) Very well						*
b) Fairly good						
c) So-so (average)						
d) Some difficulty						
e) We didn't get along at all						
80. How good a job did your school teachers do in explaining things to you?						#
a) To be honest, they did a pretty poor job						
b) No better or worse than other teachers						
c) Actually, they explained things pretty well						
d) Excellent						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
81. When in high school usually how many evenings a week did you go out (for recreation or visiting of any kind)?						
a) Hardly any		**			**	
b) 1		**				
c) 2			**			
d) 3						
e) 4 or more	*					
82. How often did you go to the movies before you entered the Army?						
a) Scarcely ever						
b) About once a month						
c) About once every week or two						
d) More than once or twice a week	*		*			
e) 3 or more times a week		*				
83. How many books have you borrowed from the library during your last two years as a civilian?						
a) 0						
b) 1-4						
c) 5-14						
d) 10-20						
e) Over 20	*					
84. (Number of dates per week in high school) (NS)						
87. How much time do you usually spend reading newspapers?					*	
a) Almost none						
b) 10 minutes						
c) 20 minutes						
d) 30 minutes						
e) 1 hr. or over						
88. Among the people you know, where do you estimate you stand as an entertainer and leader in conversation and social affairs?						
a) At the top or among the few best					*	
b) Better than average						
c) Just average						
d) Not very high						
e) Probably rather low						
90. (Highest grade reached in the Boy Scouts) (NS)						
91. (Offices held during high school) (NS)						
92. During your last two years of high school, how many hours a week, both in and out of school, did you spend on athletics?						
a) Almost none						

(Continued)

Appendix C (Continued)

RESULTS ON THE LIFE HISTORY INVENTORY

Item	Total Group		Native-Born White		Negroes	
	%F>%NF	%F<%NF	%F>%NF	%F<%NF	%F>%NF	%F<%NF
G. Social and Educational History (Continued)						
b) Up to 4 hours		*				
c) 5 to 10 hours						
d) More than 10 hours						
105. (Buddies in squad during last month on line) (NS)						
106. How did you get along with the majority of the men in your squad during that last month on the MLR?	##					
a) I got along swell with most of the men in my squad	*		*			
b) I got along fairly well with most of the men in my squad				*		
c) I got along poorly with most of the men in my squad		*				
H. Miscellaneous						
103. How many men were in your squad during the last month the squad was up on the MLR (Count KATUSAS)	##				##	
a) Less than 4 men					*	
b) 5 to 7 men						
c) 8 to 10 men					*	
d) More than 10 men		**	*			
e) I was not in a squad						
107. (Length of time in squad before first fire fight) (NS)						
108. (Length of time in platoon before first fire fight) (NS)						

Appendix D

SUMMARY OF OBJECTIVE TEST RESULTS

Test Title and Variables ¹	Fighters		Non-Fighters		p ³
	N ²	M	N ²	M	
1. Book Preferences					
1.1 Drug addiction vs. "Happy-go-lucky"	164	6.60	137	6.10	
1.2 Gangsters vs. "Horatio Alger"		7.08		6.16	**
1.3 Questionable preferences (1.1+1.2)		13.78		12.26	**
2. Encyclopedic Information Test					
2.1 Willingness to take a chance in answering questions	156	6.32	124	6.20	
2.2 Incorrectness in answers		.63		.88	*
3. Estimation of Time Required					
3.1 Scatter in <u>other</u> referent time estimates	156	.93	122	1.00	*
3.2 Scatter in <u>self</u> referent time estimates	163	1.02	136	1.08	*
3.3 Low amount considered possible ⁴ in given time for <u>others</u>	158	2.62	125	2.77	*
3.4 Low amount considered possible in given time for <u>self</u>	164	3.21	136	3.18	
3.5 Scatter in <u>other</u> referent time estimates over <u>self</u> estimate	155	.95	122	.99	
3.6 Low amount considered possible in given time for others/ <u>self</u>	156	.83	124	.87	*
3.7 Scatter in <u>other</u> referent time estimates plus <u>self</u> estimate	155	1.94	122	2.07	**
4. Riddles					
4.1 Ability to handle surprises: Riddles	164	.31	139	.23	**
5. True or False Statements					
5.1 Agreement with platitudinous thinking	164	14.02	138	14.35	
6. Statements					
6.1 Unreflective acceptance of unqualified statements	164	25.73	138	27.97	**
7. Detection of Assumptions					
7.1 Ability to state assumptions: %	163	45.87	135	38.88	**
8. Direction of Personal Ability					
8.1 Level of experience in personal ability: %	151	19.32	113	20.65	
8.2 Self-confidence regarding untried performance	155	70.65	117	67.69	
8.3 High estimation of personal prowess	150	25.85	115	26.43	
9. Hidden Words					
9.1 Low rigidity: Hidden Words	163	20.71	138	18.20	**
10. Preference for Writing					
10.1 Poetic Aptness: %	164	30.46	138	29.96	
11. Remarks A and B					
11.1 Tendency to check obvious remarks	164	16.10	137	19.32	**
11.2 Extremity of response to obvious remarks		20.95		21.64	
11.3 Agreement with obvious remarks		2.39		3.23	*
11.4 Agreement with platitudes		1.78		3.69	**
12. Judgment of Human Nature					
12.1 Low pessimism over doing good	163	19.05	137	16.87	*
12.2 Tendency to agree (difference score)		6.38		7.22	
12.3 Tendency to agree (ratio)		1.35		1.70	

(Continued)

¹Tests 1-40 are group administered; 71-86 are individually given.²When a test is scored for more than one variable, the N's for the first variable apply throughout unless otherwise noted.³The p values are based on a two-tailed t-test of the difference between the means; * = significant at the .05 level;

** = significant at .01 or less. If the p value is greater than .05 the difference is considered nonsignificant.

Appendix D (Continued)

SUMMARY OF OBJECTIVE TEST RESULTS

Test Title and Variables	Fighters		Non-Fighters		p
	N	M	N	M	
13. Associations					
13.1 Anteversion/retroversion	163	1.21	136	.97	*
13.2 Pleasant/unpleasant associations		1.54		1.46	
13.2R Unpleasant/pleasant associations		.85		.68	**
14. Social Evaluations					
14.1 Decision time	163	14.26	137	11.96	**
15. Inventory E					
15.1 Knowledge of etiquette: %	163	47.06	137	40.40	**
16. Judgments					
16.1 Agreement with majority statements: %	161	48.24	136	50.94	*
18. Classifications					
18.1 Ability to suggest classifications	163	14.90	135	10.19	**
19. Appreciation of Social Influences					
19.1 Adverse/favorable self reference seen in events	163	1.15	135	1.05	
19.2 Adverse/favorable self reference seen in events		-.87		-.73	
20. Inventory P.A.					
20.1 Good physical adjustments	164	39.12	136	34.58	**
21. Speed of Coding					
21.1 General excess of aspirational level over performance in coding	165	-8.95	137	-1.44	
21.2 Excess of aspiration over improvement	166	-1.76	137	6.88	
21.3 Adaptability of aspiration level in coding	158	2.39	128	2.71	
21.4 Aspiration for coding	160	176.79	132	145.14	**
21.5 Dispersion of aspiration level	160	37.04	132	31.69	**
21.6 Dispersion of coding performance	166	34.40	137	26.54	**
21.7 Errors in coding	166	.10	137	.11	
22. Judging					
22.1 Underestimation of performance	151	-.97	104	-.29	
22.2 Underestimation of performance for dots	151	-1.16	111	-.51	
22.3 Accuracy of judging lines	164	.77	127	.75	
22.4 Inaccuracy of counting dots	163	1.16	130	1.91	
22.5 Fast speed of line judgment	164	15.56	117	13.62	**
23. Personal Taste					
23.1 Social good taste	165	.21	134	.15	**
24. Sketches					
24.1 Tendency to perceive threatening objects I: % total	166	.36	138	.26	**
24.2 Tendency to perceive threatening objects II: t/non-t		.59		.41	**
24.3 Number objects perceived in ambiguous sketches		20.90		16.78	**
24.6 Total threat: objects I and II		.95		.68	**
24.7 24.1 + 24.2: %		.08		.06	
25. Memory					
25.1 Emotional/non-emotional recall	152	.73	112	.87	
25.2 Improvement in memory	155	-.25	125	-.17	
25.3 Memory for phrases	160	9.18	130	7.07	**
26. Memorizing					
26.1 Chance/purposeful observation and memory	166	.95	136	.64	**
26.2 Increase in chance/purposeful observation and memory		-.02		.06	

(Continued)

SUMMARY OF OBJECTIVE TEST RESULTS

Test Title and Variables	Fighters		Non-Fighters		p
	N	M	N	M	
27. Number series					
27.1 Speed/accuracy in clerical task	166	1.26	137	1.32	
27.1R Accuracy/speed in clerical task		.84		.75	**
27.2 Speed in clerical task		10.46		9.22	*
27.3 Accuracy in clerical task		6.50		4.77	**
28. Pictures					
28.1 Accuracy in perceptual closure: Pictures I	166	.60	137	.56	
28.2 Accuracy in perceptual closure: Pictures II		.42		.29	**
28.3 Perceptual closure speed: Pictures I		5.56		5.74	
28.4 Perceptual closure speed: Pictures II		6.43		4.78	**
28.5 Total Speed (28.3 + 28.4)		11.99		10.52	*
28.6 Total Accuracy (28.1 + 28.2)		1.02		.85	**
29. Self Description					
29.1 High estimation of personal worth	163	41.77	139	34.35	**
29.2 High estimation of personal worth (weighted scores)		94.93		83.22	**
29.3 High estimation of personal worth (mean score)		3.35		3.19	**
30. Cube Fluctuation					
30.1 Alternating perspective: cube fluctuation	164	16.01	140	14.40	
31. Cancelling					
31.1 Oscillation	167	114.66	141	94.48	**
31.2 Speed of cancelling		514.31		422.73	**
31.3 Improvement in cancelling		.08	140	.04	
31.4 Accuracy of cancellation		5.76	141	8.99	**
31.5 Fast dotting speed	161	160.60	122	151.90	
32. Drawing					
32.1 Expansiveness of copied design	167	410.83	141	420.26	
32.2 Attention to detail in copied design		42.07		38.91	**
33. Line Mazes					
33.1 Speed on line mazes	167	372.79	140	379.26	
33.2 Inaccuracy on line mazes	167	30.07	140	40.26	*
33.3 Speed/accuracy on line mazes	167	27.34	140	22.74	
33.4 Increase in distance traveled on line mazes	165	21.74	136	23.87	
33.5 Increase in accuracy on line mazes	163	4.83	138	6.10	*
33.6 Difficult/easy mazes (distance)	167	.78	140	.83	
34. Judgment of Things					
34.1 Criticalness (severity) of judgments	162	96.72	137	94.12	
35. Writing					
35.1 Motor rigidity I: perseveration	152	165.68	107	184.84	
35.2 Motor rigidity II	164	258.73	135	256.84	
35.3 Motor rigidity III	155	75.48	110	76.19	
35.4 Motor rigidity IV	154	378.40	108	444.91	
35.5 Motor rigidity: total	167	824.05	138	798.39	
35.6 Initial/final performance in writing backwards	149	1.09	102	1.01	
36. Cursive Miniature Situation (C.M.S.)					
36.1 C.M.S. excessive use of circles	167	15.77	139	14.55	
36.2 C.M.S. speed	167	85.78	139	79.39	**
36.3 C.M.S. slanting lines crossed: errors	166	6.94	139	8.33	
36.4 C.M.S. number of correct decisions	167	12.35	140	9.85	**
36.5 C.M.S. correctness of decisions	167	.41	140	.35	**

(Continued)

Appendix D (Continued)

SUMMARY OF OBJECTIVE TEST RESULTS

Test Title and Variables	Fighters		Non-Fighters		p
	N	M	N	M	
36. Cursive Miniature Situation (C.M.S.) (Continued)					
36.6 C.M.S. total score: Run B+C	164	626.76	135	555.00	**
36.7 C.M.S. total score: B/C	167	.99	140	.96	
37. Hidden Objects					
37.1 Hidden Pictures I: perceptual rigidity	163	4.33	137	3.61	*
37.2 Hidden Pictures II: %		.70		.56	**
38. Block A					
38.1 Consonant/dissonant recall	154	1.59	111	1.74	
38.2 Memory level for attitudes checked: %	162	16.90	132	12.12	**
38.3 Disagreement with majority (total group mean)	162	.07	131	.11	
38.4 Disagreement with majority (group A and B mean)	162	.07	131	.11	
39. Block A-F "Fluctuations"					
39.1 Extremity of viewpoint	162	95.35	131	98.82	
39.2 Fluctuation score in "Neurotics Test"		.90		.93	
39.3 Fluctuation score in "Successful Test"		.95		.97	
39.4 Fluctuation of evaluation of quotation		.88		.88	
39.5 Fluctuation in logical dependence on fact		.88		.87	
39.7 Fluctuation of attitudes		1.00		1.00	
40. Block A-F, "Shifts"					
40.1 Suggestibility to authority	162	10.36	131	9.25	
40.2 Immaturity of opinion		18.98		21.34	
40.3 Low independence thru ego strength "successfuls"		4.67		2.92	
40.4 Low independence thru ego strength "neurotics"		10.03		4.26	**
40.5 Attitude shift-unconfounded		2.67		4.28	
40.6 Fluctuations of attitudes-unconfounded		30.03		29.61	
71. Reaction Time					
71.1 Slowness of reaction time	167	102.56	142	116.86	**
71.2 Irregular/regular reaction time	167	1.05	142	1.08	
71.3 Errors in maintaining complex reaction time sets	166	3.40	133	3.92	
71.4 Slowing of reaction time due to complex instructions	166	1.63	133	1.74	
71.5 Regular reaction time	167	50.23	142	57.44	**
71.6 Irregular reaction time	167	51.92	142	59.32	**
71.7 Auditory/visual reaction time	167	.86	142	.89	
72. Flicker Fusion					
72.1 High frequency of flicker fusion (20 trials)	164	65.39	142	61.82	*
72.2 Large range of flicker fusion		6.98		7.74	
72.3 Flicker fusion difference		28.94		35.73	
72.4 Direct/peripheral flicker fusion		1.03	141	1.04	
73. Peripheral Flicker Fusion					
73.1 High frequency of peripheral flicker fusion	164	6.63	141	6.08	*
73.2 Large range of peripheral flicker fusion		9.05		9.57	
74. Visual Adaptation					
74.1 Time for visual adaptation	164	4.31	141	5.49	**
75. Tapping					
75.1 Tapping speed (1 hand)	166	376.39	143	360.07	**
75.2 Two hand coordination speed	167	91.78		76.73	**

(Continued)

Appendix D (Continued)

SUMMARY OF OBJECTIVE TEST RESULTS

Test Title and Variables	Fighters		Non-Fighters		p
	N	M	N	M	
75. Tapping (Continued)					
75.3 Two hand coordination errors	167	2.25		2.17	
75.4 Errors corrected in two hand coordination: %	167	.59		.50	
75.5 One/two hand coordination tapping	166	.44		.52	**
75.6 Later/initial performance two hand coordination	166	1.23		1.28	
76. Weight Estimation (heavy weight inserted for Trials 3 and 4)					
76.1 Number errors in weight estimation	166	7.21	138	7.87	
76.2 Changes in decisions in weight estimation I: Trial 1 to 2		2.25		2.19	
76.3 Changes in decisions in weight estimation II: Trial 2 to 3		1.72		1.74	
76.4 Changes in decisions in weight estimation III: Trial 3 to 4		1.45		1.66	
76.5 Fluctuation of errors in weight estimation		3.08		3.13	
76.6 Consistency of error		.04		.05	
77. Card Sorting					
77.1 Time of card sorting (sec.)	162	239.51	132	254.02	
77.2 Color/form in card sorting	164	1.71	136	1.68	
77.3 Number cards sorted by form	164	28.59	136	28.57	
77.4 Number discards in color sorting	164	4.90	136	5.41	
78. Ataxia					
78.1 Body sway I (eyes open)	167	3.50	142	3.69	
78.2 Body sway II (eyes closed)		4.30		5.21	**
78.3 Body sway III (suggestion)		4.74		6.07	*
78.4 Sway suggestibility (78.3/78.2)		1.18		1.15	
79. Body Type					
79.1 Ectomorphy	166	4.05	143	4.54	**
79.2 Mesomorphy		4.04		3.73	*
79.3 Endomorphy		3.05		3.11	
80. Cardiovascular					
80.1 Systolic blood pressure (Σ 2 trials)	167	246.30	142	243.68	
80.2 Diastolic blood pressure (Σ 2 trials)		144.57		144.84	
80.3 Pulse pressure (Σ 2 trials)		101.81		98.84	
80.4 Increase in systolic blood pressure		1.46		1.06	
80.5 Decrease in diastolic blood pressure		.78		-.44	*
80.6 Predicted B M R (Gale)		341.67		339.02	
80.7 Change in pulse rate due to stress		-.52	140	.24	
81. Body Temperature					
81.1 Oral Temperature	167	98.11	140	98.19	
82. Environmental					
82.1 Drop in room temperature ($^{\circ}$ C.)	165	.81	139	1.12	
82.2 Mean room temperature (Σ 2 readings, $^{\circ}$ C.)	167	47.73	142	48.29	
82.3 Period of day of testing	167	4.25	142	4.30	
82.4 Serial order of testing	167	169.85	142	141.77	**
83. P.G.R.					
83.1 Mean P.G.R. deflection	167	49.51	142	51.23	
83.2 Mental/physical P.G.R.	167	.01	142	.01	
83.3 P.G.R. upward drift	165	9.70	137	20.78	**
83.4 P.G.R. adaptation	167	.53	141	.56	
83.5 P.G.R. initial resistance	167	52.20	142	70.18	*
83.2R Physical/mental P.G.R.	167	1.07	142	1.28	

(Continued)

Appendix D (Continued)

SUMMARY OF OBJECTIVE TEST RESULTS

Test Title and Variables	Fighters		Non-Fighters		p
	N	M	N	M	
84. Time Estimation					
84.1 Accuracy of time estimation resting (68 sec. period)	166	197.42	137	241.14	
84.2 Accuracy of time estimation working (68 sec. period)	156	67.66	127	127.39	*
84.3 Change in time estimation (resting estimate-work estimate)	154	122.06	123	121.22	
84.4 Resting/working time estimation	167	.87	142	.83	
84.4R Working/resting time estimation	153	4.29	123	4.38	
84.5 High length of passing time estimation working and relaxed	165	271.19	137	371.18	*
85. Myokinesis					
85.1 Myokinesis drift	166	6.15	143	7.15	
85.2 Time for drawing ten lines		90.48		96.48	
85.3 Accuracy of reproducing lines—line present		7.67		7.69	
85.4 Accuracy of reproducing lines—line absent		10.83		10.57	
85.5 Accuracy of reproducing lines—line present/accuracy of reproducing lines—line absent		.76		.78	
85.6 Change in line length—vertical minus horizontal		-19.28		-27.47	*
85.7 Mean length of line		9.74		9.95	
86. Mazes					
86.1 Speed on mazes (Σ 4 trials, in seconds)	166	229.75	139	348.27	**
86.2 Number blind alleys entered in mazes	167	4.82	141	6.40	**
86.3 Effect of disturbance on maze performance	166	1.23	140	1.19	
86.4 Long exploratory distance on maze	167	62.86	141	81.71	**
86.5 Effect of disturbance on number blind alleys entered	167	.72	140	.84	
86.6 Effect of disturbance on exploratory distance	167	.15	141	.13	
87. Mirror Drawing					
87.1 Speed on mirror drawing	167	351.75	142	282.94	**
87.2 Errors on mirror drawing		27.23		27.73	
87.3 Approval/disapproval mirror drawing		.91		.91	
88. Expiratory Force					
88.1 Maximum expiratory force I: Trials 1 + 2	167	225.17	142	212.75	
88.2 Maximum expiratory force II: mean		127.21	142	114.17	*
88.3 Range of maximum expiratory force: unmotivated		43.49	141	40.59	
88.4 Occurrence of maximum expiratory force: %		41.10	142	41.95	
89. Breath Holding					
89.1 Breath holding after 60 seconds stepping exercise	167	13.05	141	12.31	